Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of specialised skills in their practice within the public health sector in the Western Cape Province

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DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third-party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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ABSTRACT

Background

Any investment in the training of trauma and emergency nurse specialists needs to be justified in terms of their contribution as specialist nurse practitioners to the actual delivery of trauma and emergency care. The utilisation of these specialists to the full extent of their education and training will optimise the value of their contributions within the multi-disciplinary emergency team. However, factors that enable or act as barriers to the implementation of specialised skills of trauma and emergency nurse specialists in their practice are not well understood and these factors need further investigation in the South African context. An understanding of these factors can provide the foundation to guide future empowerment of their role and optimal utilisation of their specialised skills.

Methods

This research used an exploratory-descriptive qualitative design with a purposive and maximum variation sampling technique. WhatsApp video calling facilitated the use of a semi-structured interview guide to assemble data. Data was thematically analysed as described by the six steps of Braun and Clarke.

Results

Analysis of the research data revealed four themes that capture specialised practice barriers and facilitators: these were individualistic influences, organisational context, role adversity and role ambiguity. The findings of the study suggest that the skills of trauma and emergency nurses are not used optimally in their practice settings because of barriers within the organisational context and practice environment. Moreover, a lack of awareness of specialised skills and the specific role functions of trauma and emergency nurse specialists led to strains in inter-professional relations and in multi-disciplinary teamwork. This research also revealed the possibility that perceived Scope of Practice restrictions and loss of confidence in specialised skills, because of very few practice opportunities, hinder the optimal implementation of specialised skills. Conversely, implementation of specialised skills was facilitated by individual motivation, patient advocacy, supportive unit managers and expert role models.

Conclusion

The findings of this study articulated a concern for issues of implementing the skills of trauma and emergency nurse specialists in their practice. Their potential is not being optimised to ensure the productivity and sustainability of the specialist role, regardless of their confidence and competence in their specialised skills and enabling influences. Factors that were identified in hindering implementation of their specialised skills could support recommendations; this was evident from the need to address modifiable practice barriers.

Keywords

Nurse specialists, advanced skills, implementation, skills utilisation, trauma and emergency, barriers, facilitators, role, perceptions, Scope of Practice

OPSOMMING

Agtergrond

Die belegging in die opleiding van trauma- en noodverpleegspesialiste behoort geregverdig te word aan die hand van die bydraes wat hulle as spesialis-verpleegpraktisyns tot werklike trauma- en noodsorg lewer. Deur hierdie spesialiste ten volle volgens hulle kwalifikasies en opleiding aan te wend, word die waarde van hul bydraes binne die multidissiplinêre noodspan geoptimaliseer. Faktore wat hindernisse by die implementering van trauma- en noodverpleegkundiges se spesialisvaardighede in die praktyk aanbring of skep, word egter nie behoorlik begryp nie en behoort verder binne die Suid-Afrikaanse konteks ondersoek te word. Insig in hierdie faktore kan die grondslag bied vir rigtinggewing oor die toekomstige bemagtiging van hulle rol en die optimale benutting van hul spesialisvaardighede.

Metode

'n Verkennend-beskrywende kwalitatiewe ontwerp met 'n doelgerigte en maksimumvariasie-monsternemingstegniek word gebruik. WhatsApp-video-oproepe het die gebruik van 'n semi-gestruktureerde onderhoudsgids vir die versameling van data vergemaklik. Data is tematies ontleed, soos uiteengesit in die ses stappe van Braun en Clarke.

Resultate

Vier temas is in die navorsingsdata uitgewys wat hindernisse en fasiliteerders vir die spesialispraktyk saamvat: Individualistiese invloede, organisasiekonteks, rolprobleme, en rolonduidelikheid. Studiebevindings dui daarop dat trauma- en noodverpleegkundiges se vaardighede vanweë hindernisse binne die organisasiekonteks en praktykomgewing nie optimaal in hul praktykopset benut word nie. Verder veroorsaak 'n gebrek aan bewustheid oor spesialisvaardighede en die spesifieke rolfunksies van trauma- en noodverpleegspesialiste gespanne interprofessionele verhoudings en multidissiplinêre spanwerk. Hierdie navorsing identifiseer verder die moontlikheid dat waargenome praktykomvang-beperkings en die verlies van vertroue in spesialisvaardighede vanweë beperkte geleenthede in die praktyk die optimale implementering van spesialisvaardighede belemmer. Daarenteen word die implementering van spesialisvaardighede deur individuele motivering, pasiëntvoorspraak, ondersteunende eenheidsbestuurders en kundige rolmodelle vergemaklik.

Gevolgtrekking

In die studiebevindings word daar kommer uitgespreek oor implementeringskwessies wat trauma- en noodverpleegspesialiste se vaardighede in hul praktyk belemmer. Hierdie spesialiste se potensiaal om produktiwiteit en volhoubaarheid ten opsigte van hul spesialisrol te verseker word nie geoptimaliseer nie, ongeag die vertroue in en bedrewenheid van hul spesialisvaardighede en die bemagtigende invloede. Die faktore wat as belemmerend by die implementering van hul spesialisvaardighede uitgewys is, kan die aanbevelings rugsteun, soos blyk uit die behoefte om veranderbare praktykhindernisse aan te pak.

Sleutelwoorde

Verpleegspesialiste, gevorderde vaardighede, implementering, vaardigheidsbenutting, trauma en noodgevalle, hindernisse, fasiliteerders, rol, persepsies, praktykomvang

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ABBREVIATIONS

ACNP	Acute care nurse practitioner
APRN	Advanced practice registered nurse
ENP	Emergency nurse practitioner
ENSSA	Emergency Nurses Society of South Africa
HIV	Human immunodeficiency virus
ICD	Intercostal drain
ICN	International Council of Nurses
IOM	Institute of Medicine
MI	Myocardial infarction
SANC	South African Nursing Council
SCT	Social Cognitive Theory
TB	Tuberculosis
WCDOH	Western Cape Department of Health
WHO	World Health Organization

CHAPTER 1
FOUNDATION OF THE STUDY

1.1 INTRODUCTION

The provision of efficient, justifiable and quality healthcare depends upon appropriately trained healthcare professionals who are supported to provide cost-effective care (Keating, Thompson & Lee, 2010:148; World Health Organization (WHO), 2016:3). Such proficient professionals may transform the organisation and delivery of healthcare (WHO, 2016:3). The demands made on healthcare systems increase as a result of ongoing changes in healthcare as well as the quadruple burden of disease (trauma, chronic disease, co-existing HIV and TB and child and maternal health) afflicting the Western Cape. Healthcare services in the Western Cape have to manage the burden of trauma arising from vehicle accidents and violent injuries. In addition, emergencies related to mounting chronic diseases that include mental health issues, complications related to HIV and TB as well as child and maternal health services, all contribute to healthcare service demands (South Africa, 2014:2). The provision of efficient and cost-effective care that meets the demands of healthcare users called for the development of the specialty in emergency nursing (Keating *et al.*, 2010:148). However, investment in the training of trauma and emergency nurse specialists needs to be justified by their contribution to the actual delivery of trauma and emergency care. The utilisation of these specialists to the full extent of their education and training, may ensure the full economic value of their contributions across practice settings (Institute of Medicine (IOM), 2011:3).

Internationally, there is a wide interest in the advantages of specialised training for professional nurses working in trauma and emergency and this has generated a substantial body of knowledge. For example, a systematic review found that advanced nurse practitioners may be considered as a staffing option in the emergency department, with the aim of lessening the financial burden of an increased demand for emergency care where there is only a limited availability of medical physicians (Carter & Chochinov, 2007:294). This review highlights that the management of patients with minor acuities by advanced nurses reduces waiting time and improves patient satisfaction. Furthermore, an alternative option aimed at improving access to emergency care is presented, which provides for optimal utilisation of a workforce with only a limited number of physicians.

A study conducted by Sise, Sise, Kelley, Walker, Calvo *et al.* (2011:560) in the United States investigated the impact of employing advanced practice nurses with master's degrees at a Level I trauma centre. The intention behind integrating advanced practice nurses was to address the shortage of physician manpower. This study found that the introduction of

advanced practice nurses at a Level I trauma unit improved the overall quality of care provided. Also, the cost of care was reduced and it was possible to render services with a better value (Sise *et al.*, 2011:560). However, the findings of international studies should be considered with caution in the South African context, since the advanced nurse practitioners in those studies are trained at master's degree level. In contrast, nurse specialists in South Africa are trained to the level of a post-basic diploma, and no advanced practitioners are being trained, at present, at the level of speciality- specific master's degrees.

However, a study conducted by Sakran, Greer, Werlin and McCunn (2012:3) identified a lack of adequately-trained trauma and emergency staff as presenting a challenge when trying to meet the healthcare demands in low- and middle-income countries. Being part of a middle-income country, the training of speciality professional nurses has received a considerable amount of attention and priority from the Western Cape Government Department of Health (WCDOH). In an attempt to address the current service demands and meet the strategic vision of Healthcare 2030 (Western Cape Department of Health (WCDOH), 2017:1), the Department of Health has prioritised funding for training aimed at obtaining post-basic nursing speciality qualifications (WCDOH, 2017:4; WCDOH, 2019a:156). Furthermore, the WCDOH has implemented a Human Resource Development (HRD) strategy driven by the Workplace Skills Plan to prioritise scarce and critical clinical skills development of health professionals to address skills shortages (WCDOH, 2019a:93,168). In the public health service of the Western Cape, an average of twenty professional nurses per year completed the post-basic diploma qualification in Medical and Surgical Nursing Science: Trauma and Emergency during the 2010 – 2015 period (South Africa, 2017:5).

Regulation 212 (South African Nursing Council (SANC), 1997) allows a professional nurse to register the additional qualification in Medical and Surgical Nursing Science: Trauma and Emergency. Registration as a nurse specialist in trauma and emergency at the end of a one-year diploma course depicts a professional nurse who has mastered the specialised skills and knowledge specific to trauma and emergency nursing. Trauma and emergency nurse specialists are employed in specialised units dedicated to the care of critically ill patients with pathology that has not yet been diagnosed, requiring time-sensitive management (SANC, 2019a:1). The SANC endorses the International Council of Nurses (ICN) definition of a nurse specialist and emphasises that nurse specialists with advanced training should be functioning at a higher cognitive level, portraying critical thinking and expanded clinical skills appropriate to their level of education (SANC, 2019a:4, ICN, 2009:6).

Nevertheless, Pelletier, Donoghue and Duffield (2003:441) caution against the assumption that specialised knowledge, skills and changes in attitude gained from post-basic studies will

automatically translate into changes in the practice environment. Despite the importance of utilising trauma and emergency nurse specialists to improve health service delivery, the researcher could not identify South African research studies that aim to investigate the barriers and facilitators to the implementation of their specialised skills. Hence, the question remains whether these nurse specialists continue to apply the specialised skills they acquired during training after they return to practice.

Complex practice nursing roles are developing globally, and opportunities for specialised nursing practice are expanding worldwide in response to the need for specialised nursing care at a higher level of practice. Yet it is well recognised that barriers exist which prevent specialist nursing practitioners from being able to practice to the full extent of their education and training (Wolf, Delao, Perhats, Moon & Carman, 2017:433). Overcoming any such barriers against specialised nursing practice can promote optimal role realisation. Moreover, if steps are taken to ensure that specialised nursing practitioners are able to practice in accordance with their level of education, it may provide an opportunity to assess the impact of the advanced nursing practitioner's role on healthcare delivery.

There is insufficient understanding of those factors that either enable, or act as barriers to, the implementation of specialised skills of trauma and emergency nurse specialists in their practice and these factors need further investigation in the South African context. This study aims to present the challenges that trauma and emergency nurse specialists face when implementing their specialised skills, as well as the enablers which facilitate the practical application of those specialist skills. The stability and sustainability of the nurse specialist role in practice may be impeded by challenges those nurses face in trying to implement their specialised skills and knowledge (McInroe, 2016:20–21).

1.2 SIGNIFICANCE OF THE PROBLEM

Information obtained from exploring the perceptions of nurse specialists in trauma and emergency regarding their skills implementation, will help to improve the sustainability and utilisation of their role within the multi-disciplinary team. The articulation of factors that influence the implementation of specialised practice after post-basic study is needed in order to develop legislation and policies that position specialised nursing practitioners as being pivotal in providing cost-effective, safe and quality care that meets healthcare demands (Keating *et al.*, 2010:152). This is especially relevant in the South African context where trauma and emergency healthcare demand often exceed resource capacity.

1.3 RATIONALE

The implementation of trauma and emergency nurse specialists' training in their practice has not been considered adequately in the South African healthcare context. Compared to the extensive research done internationally (Dubree, Jones, Kapu & Parmley, 2015; Fenwick, Soanes, Raven, Park & Jones, 2020; Jones, 2005; Jones & Kapu, 2013; Keating *et al.*, 2010; Kleinpell, Scanlon, Hibbert, DeKeyser Ganz, East *et al.*, 2014; McConnell, Slevin & McIlfatrick, 2013; McInroe, 2016; McKenna, Halcomb, Lane, Zwar & Russell, 2015; Murphy, Curtis & McCloughen, 2019; Sullivan, Dachelet, Sultz, Henry & Carrol, 1978; Wolf *et al.*, 2017), it appears to be a novel approach to investigate barriers and facilitators involved in the utilisation of skills and role of trauma and emergency nurse specialist in unique South African healthcare settings. In a seminal master's degree study done by Gassiep (2005) available as an unpublished thesis, the role of emergency nurses in prehospital and hospital settings were explored and described. This author refers specifically to the legislative barriers and role confusion involved with emergency nurse specialist's practice in the background and rationale for that study (Gassiep, 2005:7). However, the study did not aim to investigate barriers and facilitators to specialised skill implementation of trauma and emergency nurse specialists in their practice and appear to be the last South African study considering the role of these nurse specialists. Therefore, the researcher could identify a possible knowledge gap in current scientific knowledge about trauma and emergency nurse specialists' skill implementation issues in South African emergency care.

The researcher participated in an inter-disciplinary workgroup led by the Directorate of Nursing Services of the WCDOH to create a specific job description for trauma and emergency specialists in the Western Cape. During this workgroup it became apparent that the specialised skills and role of trauma and emergency nurse specialists are not clearly understood or fully utilised. Moreover, members of the trauma and emergency multidisciplinary team were not aware of the specific competencies mastered during the post-basic training of the trauma and emergency nurse specialist. The researcher was also concerned to discover that members involved with high-level management of nursing services expressed the opinion that there is no difference between an experienced trauma and emergency professional nurse, and the trained specialist. A lack of awareness of the level of specialised skills and practice responsibilities of the trauma and emergency nurse specialist emerged clearly during these workgroup discussions. Moreover, the role and expected functions of these specialists as part of a multidisciplinary team remains rather vague, and a specific job description has yet to be finalised for the Western Cape. It should be noted that at the time of the workshop discussions, there were no defined trauma and emergency nurse specialist competencies relating to nurses qualifying under SANC regulation R212 post basic

course. Thus, there is still a need to define the optimal utilisation of the acquired specialised skills of trauma and emergency nurse specialists.

The researcher observed, while doing accompaniment in facilities, that not all trauma and emergency nurse specialists apply their specialist skills once they return to practice. Anecdotal reports from operational managers support this observation since they do not experience a remarkable change in the actual practice of some trauma and emergency nurse specialists. However, other trauma and emergency nurse specialists excel in their new role and apply their specialised skills in their everyday practice.

The researcher investigated the perceived factors involved in applying the extended knowledge and skills of specialist nurses in trauma and emergency into their practice environment within the South African public healthcare context. The researcher is a critical care nurse specialist (since 2006) and lecturer currently teaching the trauma and emergency and critical care post-basic diploma course from 2017. As such, the researcher identified a disparity between the level of expanded skills training and the actual utilisation of these skills. As a SANC registered nurse educator (2015), assessor and moderator (2020), expertise of the researcher in the trauma and emergency nurse specialist discipline are founded in theoretical principles of emergency care, critical thinking and knowledge transfer required for theory and practice integration of trauma and emergency nurse specialists. An understanding of the factors that promote or hinder the implementation of specialist skills in practice, from the perspective of trauma and emergency nurse specialists, can provide the foundation to guide future clarification and empowerment of their role. Furthermore, strategies can be tailored to optimise the contributions of specialist nurse training to meet healthcare demands for timely, cost-effective and accessible trauma and emergency care in the Western Cape province.

1.4 PROBLEM STATEMENT

Post-basic specialisation should lead to changes in the behaviour and clinical practice of trauma and emergency nurse specialists in the public health sector. Hence, the expanded skills and knowledge of trauma and emergency nurse specialists should empower these clinical nurse experts to play a pivotal role in the trauma and emergency multi-disciplinary team that could improve service delivery and access to care. Any underutilisation of the specialised skills of nurse specialists in trauma and emergency units is unproductive use of those human resources that could otherwise improve quality and add value to healthcare facilities (Sise *et al.*, 2011:560). Moreover, the poor state of the South African economy has led to budget constraints which compel the WCDOH to improve staff productivity and efficiency

in order to safeguard health service delivery and patient care (WCDOH, 2019a:162). Currently, there is a poor understanding of the barriers and facilitators relating to the practical implementation of the skills acquired by trauma and emergency nurse specialists. A facilitating factor is one which will support behavioural changes that increase the application of specialised skills. In contrast, a barrier will decrease the probability of applying specialised skills (Murphy, Curtis & McCloughen, 2019:1149). An investigation into these factors that either hinder or support the skill utilisation of trauma and emergency nurse specialists is essential in order to address the need for enhanced staff productivity and efficiency. Furthermore, empowering trauma and emergency nurse specialists to fulfil their specialised roles is essential for appropriate and patient centred healthcare delivery.

1.5 RESEARCH QUESTION

What are the perceptions of trauma and emergency nurse specialists regarding the factors that hinder or facilitate the implementation of their specialised skills in their practice within the public health sector in the Western Cape Province?

1.6 RESEARCH AIM

The aim of the research described in this thesis is to explore and describe the perceptions of trauma and emergency nurse specialists regarding the factors that hinder or facilitate the implementation of specialised skills in their practice within the public health sector of the Western Cape. This research intended, by means of exploration and description, to improve insight and awareness of implementation issues related to the application of specialised skills by trauma and emergency nurse specialists.

1.7 RESEARCH OBJECTIVES

- To explore and describe the perceived facilitators regarding the implementation of specialised skills by trauma and emergency nurse specialists in their practice within the public health sector of the Western Cape Province
- To explore and describe aspects that act as barriers relevant to the implementation of specialised skills by trauma and emergency nurse specialists in their practice within the public health sector of the Western Cape Province

1.8 THEORETICAL FRAMEWORK

The researcher was guided by the process of data analysis and discussion of findings to identify a theoretical framework pertinent to understanding factors that hinder or facilitate the application of specialised skills by trauma and emergency nurse specialists. A theoretical

framework can be explained as the use of a theory to articulate the processing structure implemented to create new knowledge in research (Collins & Stockton, 2018:2). The researcher contemplated Benner's theory (1984) as a nursing theory that considers actual skill development and cognitive awareness in practice situations on a continuum from novice to expert practitioner. Although appropriate to place trauma and emergency nurse specialist at a specific point in a linear progression in their learning needs of their practice development and expertise, it could not sufficiently explain the complex interactions between individuals and their practice environment emerging from the study data. The nature of facilitators and barriers to skill implementation reported by participants reflected bi-directional interactions, rather than a linear progression of their practice skills as they gain experience in their specialist role. This limitation of Benner's theory experienced by the researcher, relate to attempts of other researchers to explain the complexity and interconnected practice development phenomena in expert nursing practice (Lyneham, Parkinson & Denholm, 2009:2480). Therefore, the social cognitive theory (SCT) of Bandura (Bandura, 1977, 1986; Schunk, 2012; Schunk & DiBenedetto, 2020; Wood & Bandura, 1989) could be applied as a theoretical framework to support coherent and comprehensive discussion of significant study findings. The use of Bandura's SCT to provide a theoretical framework for this study influenced the choice of themes and improved the trustworthiness of the research process, as advised by Collins and Stockton (2018:8). Moreover, this SCT theory allowed the researcher to contextualise embedded meanings in a participant's perceptions and to support articulation of findings to answer the research question (Collins & Stockton, 2018:4,6).

The coding and naming of those themes narrated by participants called for a theory that could make sense of skills implementation issues reflecting a multi-directional interplay between factors enabling or hindering the implementation of specialised skills, the individuals and their external environment. Therefore, these complex reciprocal interactions that influence the application of specialised skills in the trauma and emergency environment, could be clarified with rich descriptions by aligning findings with Bandura's SCT (1977). By doing this, the SCT provides guidance to help identify significant issues represented in research data as the theoretical lens of this qualitative inquiry; this in turn supports recommendations to address practice barriers (Creswell & Creswell, 2018: 90,108). Bandura's SCT (1977) theoretical lens of this study will be discussed in this opening chapter, and will later be applied in the discussion of research findings to support the emerging nature of qualitative research (Creswell & Creswell, 2018:111). Discussion of individualistic and external environmental influences on behaviour relevant to the application of specialised skills will be aligned with Bandura's SCT in Chapter 5.

1.8.1 Bandura's reciprocal interaction model

Bandura (1986) illustrates psychosocial functioning of individuals with the use of a reciprocal causation model. This model indicates the bi-directional interactive determinants of behaviour as being the individual's cognitive and personal factors, and the external environment respectively. The bi-directional influence between these determinants implies that individuals actively construct their environment, while at the same time they are also a creation of such an environment (Wood & Bandura, 1989:362). This triadic reciprocity is illustrated in Figure 1.1 below.

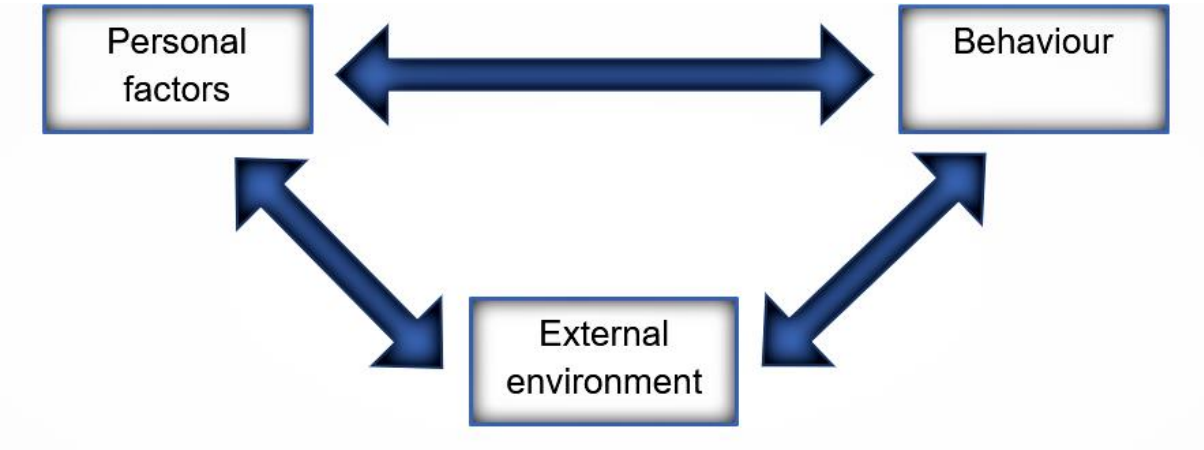

Figure 1.1: Bandura's model of reciprocal interactions
(Wood & Bandura, 1989:362)

The research findings reflected a dynamic interplay between cause and effect as far as factors enabling or hindering skills implementation were concerned, in terms of the individual and their practice environment. Therefore, Bandura's reciprocal interaction model could be extrapolated to the multidirectional characteristics of research findings where application of specialised skills represents the actions that exemplify the specific behaviour being studied. Factors that either hinder or facilitate actions or skills implementation determine whether specialised skills will be either be used, or not, and were recognised as determinants of the behaviour being studied. This application to research findings can be illustrated in an applied Bandura's model of reciprocal interactions (Wood & Bandura, 1989:362) designed by the researcher, as follows:

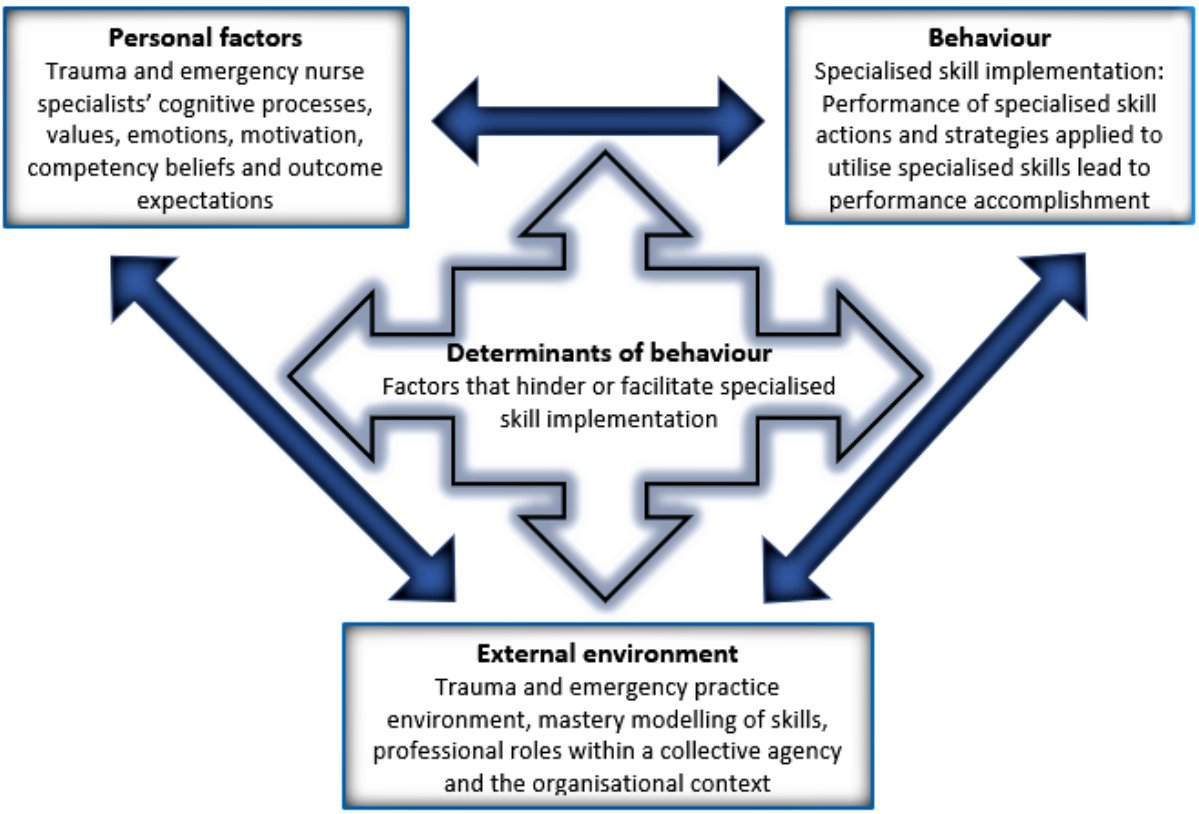

Figure 1.2: Applied Bandura's model of reciprocal interactions
(Wood & Bandura, 1989:362, figure by researcher)

1.8.2 Behaviour: Performance of learned skills, actions and strategies

In the context of this study, it is important to note that Bandura (1977) distinguishes between newly-acquired competency and the actual performance of previously-mastered actions, since the attainment of competency in an action does not automatically translate into being able to implement such action consistently (Wood & Bandura, 1989:364). Learned skills, strategies and behaviours might only be practiced or required at a later stage in real-life work situations (Schunk, 2012:105; Wood & Bandura, 1989:363).

The answer to the question of whether individuals will perform actions as learned, is grounded in their own motivation, capability beliefs as well as in the envisioned consequences of such actions (Schunk, 2012:101). Bandura (1977:192) theorises that mechanisms involved in acquiring new strategies in behaviours and the retention of newly attained skills are cognitively processed through performance accomplishments. A growing confidence in skills and sufficient proof of the effectiveness and value of those new skills, are crucial for continued and consistent application of those skills. Conversely, if individuals do not experience adequate success with the use of newly-acquired skills, then they will promptly abandon those skills when they face challenges (Wood & Bandura, 1989:364).

1.8.3 Personal factors

The term ‘personal factors’ refers to individuals’ cognitive processes, values, perceptions and affects (Schunk & Usher, 2012:13). Various individualistic influences, identified by Schunk and DiBenedetto (2020:2–4) as pertaining to this study, will be discussed as perceptions of self-efficacy, outcome expectations and motivation.

1.8.3.1 Perceptions of self-efficacy

Bandura (1977:193) defines self-efficacy perceptions as the belief that a person holds regarding their ability to perform an action competently. A perceived self-efficacy facilitates an individual’s performance, based on their belief regarding their ability to perform a task well. Additionally, beliefs in competency have an effect on a person’s activity selection and readiness to pursue opportunities in external environments (Wood & Bandura, 1989:365–366).

Any self-appraisal of one’s own capabilities through cognitive processes requires sources of efficacy information such as performance successes, social experiences, social modelling and emotional indicators (Bandura, 1977:195). Positive task accomplishments are the most reliable source of self-efficacy information when a person is able to achieve a valuable goal. Observing and social comparison of the performance of actions by others, can provide individuals with additional input to appraise their own self-efficacy. Furthermore, feedback and verbal persuasion from others influence perceptions of self-efficacy. Emotional reactions that a person connects to their judgement of competency to perform an action, inform and affect self-efficacy. Optimistic emotional reactions such as performance satisfaction, reinforce confidence in one’s performance and also direct efforts to endure in actions (Schunk & DiBenedetto, 2020:3).

1.8.3.2 Outcome expectations

The term ‘outcome expectancy’ depicts an individual’s prediction of the consequences of particular behaviours or actions (Bandura, 1977:193). However, a person may believe that specific actions will produce certain outcomes, but lack confidence in their ability or available opportunities to perform the required activities (Bandura, 1977:193). A person will focus on strategies and perform actions that they can envision will lead to valued outcomes. During social interactions, people will pay attention to models portraying valued skills to inform their outcome beliefs (Schunk & DiBenedetto, 2020:4).

1.8.3.3 Motivation

SCT conceptualises motivation in terms of individual attributes that prompt and sustain goal-directed actions (Schunk & DiBenedetto, 2020:1). Self-regulation of motivation and action transpire through satisfaction when valued outcomes are achieved, and discontentment with inadequate performance (Wood & Bandura, 1989:366). Outcome expectations sustain long-term motivation and perseverance through a person's belief that they will eventually succeed (Schunk & DiBenedetto, 2020:4). Within the model of reciprocal interactions (Figure 1.1), behavioural aspects such as task choice, effort, perseverance and successful performance cause motivational outcomes as well as guide motivation (Schunk & DiBenedetto, 2020:4). Self-efficacy beliefs are the driving force of motivation to direct effort and perseverance to overcome performance challenges. It is noteworthy that the same behavioural aspects were also linked to perceptions of self-efficacy; this observation further supports the triadic reciprocal nature of Bandura's theory (Wood & Bandura, 1989: 365). Moreover, an individual who observes role models, in their own peer group achieving valued outcomes, becomes motivated also to attempt those tasks through the cognitive process of social comparison (Schunk, 2012:108).

1.8.4 External environment

The concept of developing proficiency in performing a given task based on mastery modelling of skills, is central to the reciprocal social environmental influences on the individual and task performance behaviour (Wood & Bandura, 1989:362). Attainment of desired outcomes and the success of one's peers in performing tasks, motivate people to imitate and value those modelled actions. Likewise, the performance of learned actions is mediated through social feedback based on the correctness, effectiveness and results of such actions in the social environment (Schunk, 2012:104). Bandura refers to his own published work in 1971 to explain that individuals create impressions of new patterns of behaviour by observing others who later guide actions as a cognitive process (Bandura, 1977:192).

Characteristics that inspire observers to follow their selected role models include the considered competency of those role models and their apparent similarity to the observer. Significant similarities pertaining to this study include educational level (other trauma and emergency nurse specialists) and professional work experience (senior trauma and emergency nurse specialists acting as team leaders or unit managers); these help to determine performance appropriateness, outcome expectations and also allow for self-efficacy appraisal by social comparison (Schunk & DiBenedetto, 2020:5).

Schunk (2012:104) reasons that the scope of triadic reciprocity between people and their environment extends beyond individuals since they do not exist or function in isolation. The concept of collective agency reflects a group's shared beliefs in what they can achieve through collective action. Therefore, groups create and are influenced by their actions in the same way as individuals. Fundamental to the social and external environment in this study's research settings are professional roles within a collective agency and the organisational context where participants practice their specialised skills. The full extent of individual and collective agency in the social environment and task performance as triadic reciprocally influences, will support discussions of research findings in Chapter 5.

1.9 RESEARCH METHODOLOGY

An overview of the research methodology is presented below in Figure 1.3. A brief discussion of the research methods employed in this research is presented in the current chapter. A detailed description of research methodology will be provided in Chapter 3.

Figure 1.3: Study research methodology

(Figure by researcher)

1.9.1 Research design

A qualitative research approach with an exploratory-descriptive design was used to investigate and describe the perceptions of trauma and emergency nurse specialists regarding barriers and facilitators to the implementation of their specialised skills.

1.9.2 Study setting

The study was conducted at the trauma and emergency units of two public hospitals in the Western Cape province of South Africa. One tertiary hospital (level I trauma and emergency service) and a district hospital (level II trauma and emergency service) were selected. These two hospitals were selected to provide a sufficient variety of experiences encountered by trauma and emergency nurse specialists regarding the implementation of their specialised skills at different levels of trauma and emergency care.

1.9.3 Population and sampling

The population of this study consisted of professional nurses who are registered with SANC as nurse specialists after completion of post-basic training in Medical and Surgical Nursing Science: Trauma and Emergency. Those participants are employed at a district and tertiary hospital in the Western Cape. The researcher used a maximum variation purposive sampling technique to access diverse participant demographics in terms of gender and trauma and emergency units; the intention was to facilitate a variety of descriptive data and deeper insights (Neergaard, Olesen, Andersen & Sondergaard, 2009:2). Data collection continued until data saturation was achieved after ten participants had been interviewed and no more new insights could be generated to meet the objectives of the study.

1.9.4 Data collection tool: Interview guide

A semi-structured interview guide was implemented during an online video call and this is provided as Appendix 1. The study objectives guided the broad questions in the interview guide and probing questions were asked whenever necessary to clarify reported experiences and elicit rich descriptions.

1.9.5 Pilot interview

The researcher conducted one pilot interview with a trauma and emergency nurse specialist from the tertiary hospital. Here, video calling was used to confirm the relevance of the data content generated by the questions provided in the interview guide (Moser & Korstjens, 2017:14). A subsequent reflection on the pilot interview indicated that the interview guide questions indeed did elicit rich data which could be used to meet the outcomes of the study. Therefore, data from the pilot interview was integrated into the study, since no changes to the interview guide were required.

1.9.6 Trustworthiness

The rigor and quality of this qualitative research study was ensured by adhering to the criteria for trustworthiness as being dependability, credibility, transferability and confirmability (Grove, Gray & Burns, 2015:392).

1.9.7 Data collection

The researcher obtained data through individual interviews in real time using online video calling implementing the semi-structured interview guide. The data collection approach had to embrace technology and virtual communication in an effort to comply with strict lockdown strategies when South Africa entered a nationwide lockdown as a result of the COVID-19 pandemic at the end of March 2020. All participants preferred to have their calls at home, except for one participant who agreed to participate on the condition that their call took place during working hours. Interviews lasted between 40 and 60 minutes and were recorded on the researcher's voice recorder and computer.

1.9.8 Data analysis

Analysis of data commenced after each interview. Inductive thematic analysis was used to recognise, explore and report precedents or themes embedded in the data as prescribed by Braun and Clarke (2006:87). Data was manually coded to preserve the researcher's ability to analyse data intuitively with insight into the context in which it was shared (Cropley, 2019:123).

1.10 ETHICAL CONSIDERATIONS

The researcher adhered to the ethical principles advocated by the Declaration of Helsinki (World Medical Association, 2013). The study was conducted according to the ethical guidelines and principles of the South African Guidelines for Good Clinical Practice (2006), the Medical Research Council's (MRC) Ethical Guidelines for Research (2002), and the Department of Health's Ethics in Health Research: Principles, Processes and Studies (2015). The study proposal was reviewed by the Health Research Ethics Committee (HREC) of Stellenbosch University and ethical approval was obtained to conduct the study (Ethics Reference number: S19/10/277 – see Appendix 2). An amended proposal was submitted on 27 June 2020 and was approved on 2 July 2020. The proposal was amended in order to change the data collection method from face-to-face interviews to virtual interviews on WhatsApp and to obtain online consent; this change became necessary because of the COVID-19 pandemic (amendment approval included as Appendix 3). Approval by the National Department of Health (Appendix 4) was obtained as well as institutional approval (Appendix 5).

1.10.1 Right to self-determination

This ethical principle is based on the basic human rights to dignity, autonomy and freedom (Mick, 2019:29). The researcher allowed participants to decide independently and voluntarily whether to participate in the research study. Participants were informed about the study's purpose and procedures as well as any risks and benefits to them as individuals. Participants were informed that they may withdraw from the study at any time without any risk or penalty and may refuse to give information; such refusal would have no consequences for their employment or influence future educational opportunities. No form of coercion or pressure was used to persuade potential participants to consent and partake in the research study. Participants were supported with online, clear and understandable information covering all aspects of the research study; that information was adequate to allow for informed consent to be given by potential participants (Google form included as Appendix 6). Information and consent to participate were provided in English on this Google form since it is the official language of communication in the government sector in the Western Cape.

The procurement of consent and provision of information were facilitated with a Google form link that was created by the researcher (available link: https://forms.gle/7oJe81VPwbUXikNj6). This link to the information and consent was sent to potential participants with WhatsApp or email. Participants could then indicate their consent and understanding of information by clicking on boxes or choosing from dropdown boxes. The responses were automatically captured as the Google link responses and saved in the researcher's password protected Google drive (see Appendix 7 for a report of completed participant consents as captured on Google drive). The protection of participant data was supported by accessibility restrictions incorporated in the specific Google form, and the data could only be viewed by the researcher in a password protected Google drive. Efforts to de-identify a given participant's personal information were guided by the Protection Of Personal Information Act, 2013 (Republic of South Africa, 2013:12–13), since participants had to provide their cell phone number, together with their service provider to allow the researcher to reimburse the participant with their R100 data voucher.

1.10.2 Right to confidentiality and anonymity

Participants were assured that their personal information would not be shared with others without their knowledge and permission, in order to protect their right to privacy. The researcher only phoned participants at an agreed date and time in order to consider their privacy.

The identities of participants were protected by ensuring anonymity during data collection and reporting. Participants were advised that the original list that allocated an identifying random codename to each participant was saved separately from the interview data on a USB drive in a password-protected file, with the USB drive locked in a safe. Reporting of findings was only linked to the randomly allocated codename of a participant to ensure that they remain anonymous. Confidentiality was protected by ensuring that reported data cannot be associated with individual participants, to protect their identity, as advised by Cropley (2019:79). Research findings were also reported without linking a participant's responses to the hospital employing that person. Field notes and transcript documents were stored in a locked safe separate from the original code allocation list. All electronic data including audio recordings of interviews were saved in two different locations, such as a USB drive and Google drive in password-protected files and restricted accessibility; the aim was to prevent the loss of data in the event of computer failure, as advised by Grove *et al*. (2015:88).

1.10.3 Right to protection from discomfort and harm

The researcher complied with this ethical principle by securing the wellbeing of the participants in terms of their physical, emotional and psychological safety. The participants' level of risk was minimal in this study, and would not have caused them more harm than what was present in ordinary daily life (Mick, 2019:29). Measures were taken to monitor and note any distress during interviews. However, none of the participants actually displayed any sign of distress during interviewing. The researcher saved the contact details for the counselling service provided by the government employee health and wellness program, so that this could be immediately available for sharing with participants should the need arise during interviews. The wellbeing and comfort of the participants received priority during all contact with potential and selected participants. In order to prevent any perception of possible undue incentive to participate in the study, participants were reimbursed for data usage after they completed the online Google consent form and had made themselves available for their interview.

Benefits of the study was explained to participants as being an improved role understanding and support for the empowering of the trauma and emergency nurse specialist. Other benefits included effective utilisation of specialised trauma and emergency skills and improved service delivery in terms of quality, cost effectiveness and accessible trauma and emergency care.

1.11 DEFINITIONS

Advanced nurse specialist: A nurse specialist with a master's level education who participates in research and formulation of health policies (Esterhuizen, 2016:12). The term "advanced practice registered nurse (APRN)" or "emergency nurse practitioner (ENP)" was used in this study when referring to international studies on advanced practice and these terms indicate that these nurse practitioners were trained at Master's educational level with the purpose of complete autonomous nursing practice (Dubree *et al*., 2015:44).

Specialised skills: In the context of this study, the term 'specialised skills' when applied to trauma and emergency nurse specialists refers to specialised nursing clinical practice skills in the assessment, prioritisation of assessment, nursing management, coordination and collaboration of the trauma and emergency patient (Jones, Shaban & Creedy, 2015:195). These specialised skills were obtained by completing a one-year post-basic qualification according to R212 regulation of nurse specialists' training.

Level I trauma and emergency centre: A facility that acts as a major regional referral centre, with all specialities involved in trauma and emergency care available 24 hours a day (Hardcastle, Steyn, Boffard, Goosen, Toubkin *et al.*, 2011:190).

District hospital trauma and emergency unit: A level II unit equipped to provide initial definitive care, 24 hours a day, for injuries of all severity but with complex cases for critical care management referred to a level I centre (Hardcastle *et al.*, 2011:190).

Nurse specialist: A professional nurse with an additional post-basic R212 qualification (SANC, 1997) in a specific clinical field of nursing such as psychiatry, general critical care, operation theatre or trauma and emergency (Esterhuizen, 2016:12)**.** SANC endorsement of a nurse specialist at this level would imply expertise and in-depth knowledge in a specific area of practice (SANC, 2012). Furthermore, new competencies published by SANC for emergency nurse specialists, oblige individuals in this nursing category to be practicing at higher levels of autonomy to initiate patient management without instruction from others (SANC, 2019a:1).

Public health sector: Government health service where taxpayer's money funds the system and where services are offered free of charge to deserving healthcare users (Geyer, Naude & Sithole, 2002:11).

Scope of practice: Guidelines that prescribe and regulate the practice of nursing and midwifery and allow nurses and midwives to perform any acts they have been trained for (Geyer *et al.*, 2002:13).

1.12 DURATION OF THE STUDY

Table 1.1: Duration of the study

Year	Month	Activity
2020	February 2020	Ethics approval from HREC obtained
2020	March 2020	Provincial / institutional permission
2020	October 2020	Pilot interview
2020	November 2020	Data collection
2020	December 2020	Data analysis
2021	1 March 2021	Submission of thesis for examination

1.13 CHAPTER OUTLINE

Chapter 1: Foundation of the study

In this chapter the topic is introduced with a summary of the significance of the problem, supported by the rationale for the study, problem statement, research question, aim and objectives, theoretical framework, methodology, ethical considerations, definitions and the duration of the study.

Chapter 2: Literature review

Chapter 2 presents the literature reviewed on topics such as the concept of the specialised skills of trauma and emergency specialists, utilisation of trauma and emergency nurse specialists and the challenges to the implementation of their specialised practice**.**

Chapter 3: Research methodology

A discussion of the research design and methodology employed to answer the research question is provided in Chapter 3.

Chapter 4: Results

This chapter includes a detailed discussion of the data analysis process used to interpret the participant's perceptions of factors that facilitate or hinder the application of their specialised skills in practice.

Chapter 5: Discussion, conclusions and recommendations

This chapter presents a discussion of data generated by the study, provides a conclusion and makes recommendations.

1.14 SIGNIFICANCE OF THE STUDY

Creswell and Creswell (2018:173) describe the significance of a study in terms of a statement which describes the importance of a problem for different audiences and which then validates the worth of the study. This study is important because the specialised skills of trauma and emergency nurse specialists are critical in a developing country where the aim is to ensure universal population healthcare coverage in resource-poor healthcare practice environments burdened by quadruple disease profiles. The specialised nursing skills acquired in post-basic trauma and emergency training need to be applied optimally in order to maximise their potential to contribute to universal healthcare coverage in South Africa. Furthermore, the empowerment of these nurse specialists, so they can function as clinical nurse leaders and clinical experts in trauma and emergency nursing care, will contribute to safe, appropriate and timely delivery of trauma and emergency care.

Any exploration and description of the factors that facilitate the implementation of those specialised skills acquired by trauma and emergency nurse specialists will add to scholarly research in the field of specialised nursing practice. A better understanding of factors that empower clinical leadership and facilitate optimal utilisation of specialised trauma and emergency nursing skills can support focused and appropriate policy development. Conversely, any barriers identified as hindering the optimal implementation of specialised nursing skills, including restrictive organisational practices, can be articulated and addressed in order to capitalise on the investment in expanding registered nurses' practice skills and clinical leadership role. A better understanding of the underlying dynamics in these nurse specialists' practice environment within the bigger organisational context are critical to productivity considerations. Moreover, those study findings that speak to professional and organisational leaders could enhance awareness of nurse specialists' skills and the potential value of their clinical nursing expertise in contributing to patient-centred healthcare delivery in the multi-disciplinary team. Employers could also use the information from those study findings to motivate for funding to support trauma and emergency nurse specialists in keeping their certification of accredited courses up-to-date and ensuring practice opportunities to maintain proficiency in specialised nursing skills.

A description of professional Scope of Practice implications for trauma and emergency nurse specialists can serve as input to discussion and interpretation of the Scope of Practice, by members of the nursing profession, in terms of specialised practice. Moreover, collaborative inter-professional discussion of Scope of Practice implications, and the roles and functions of trauma and emergency nurse specialists, could improve empowerment and awareness of nurse specialists as clinical nurse experts and leaders.

Insights into the challenges faced by trauma and emergency nurse specialists after they complete their post-basic studies and return to their practice environment, may guide planning of the new curriculum for post-basic nurse specialisation to be implemented after 2021 in South Africa. This could ensure that the specialised nurses' skills and knowledge meet practice demands and allow for clinical leadership skills required for the best practice multi-disciplinary approach to trauma and emergency care. The study findings may also, in a very modest way, provide insight into what is required of a person to be successful as a trauma and emergency nurse specialist in a very challenging practice environment; they may also provide some guidance for selecting candidates to enrol in this post-basic course.

Last, but not least, the findings of this study may revitalise the motivation and passion of trauma and emergency nurse specialists for their specialised skills and positive contribution to patient outcomes. Although a naïve notion in qualitative research, giving 'a voice' to trauma and emergency nurse specialists' perceptions of their practice experiences through scientific enquiry, may stimulate further professional discussions to meet their specific practice needs.

1.15 CONCLUSION

Nurse specialists in the fields of trauma and emergency need to practice to the full potential of their training and education to optimise the value of their specialised knowledge and skills. Transformation of healthcare service delivery aims to meet the demands of the ever-changing healthcare landscape. This calls for an improved understanding of the barriers against, and facilitators of, specialised skills utilisation in the practice of trauma and emergency nurse specialists. International research establishes scientific evidence that optimal utilisation of professional nurses, educated to higher levels, is pivotal to meet trauma and emergency care demands. However, South African research on specialised nurse's skills in trauma and emergency has not yet received the same attention, especially regarding barriers and facilitators of specialised skill implementation, in the practice of this small group of nurse specialists.

This study will explore and describe these factors from the perspective of trauma and emergency nurse specialists' perspective, applying the theoretical lens of Bandura's SCT (1977). Study findings may improve awareness of practice barriers that need to be addressed, as well as facilitators that could be encouraged and supported, to realise their full potential contributions as clinical nurse experts in multi-disciplinary patient management; this would lead towards optimising the utilisation of their specialised skills.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

Chapter 2 address the purpose of a literature review in qualitative research and describes how it was applied to the study. Firstly, the process of reviewing the relevant literature written by other scholars provided the context for the study of the perceptions of trauma and emergency nurse specialists regarding factors that either hinder or facilitate the implementation of specialised skills in their practice. Secondly, reviewing the literature created an awareness of existing knowledge which then provided the background about the research topic and highlighted gaps in current knowledge (Grove *et al.*, 2015:163). LoBiondo-Wood and Haber (2014:51) explain that a literature review requires the assembly and appraisal of pertinent and significant literature in a specific area with the aim of developing an overall comprehension of the available knowledge. This chapter reflects the preliminary review of the available literature that provided an awareness and understanding of the topic in order to contextualise trauma and emergency specialist nursing. Further literature appraisals were conducted during data analysis and the discussion of results to facilitate the interpretation of the participants' perspectives.

Apart from an unpublished action research study (Gassiep, 2005) that aimed to explore and describe the role of the specialist emergency nurses working in prehospital settings and emergency rooms, the researcher could not discern any research studies that aimed to investigate the utilisation of the specialised skills of trauma and emergency specialists in the South African context. Therefore, a knowledge gap in this specialised nursing discipline as far as South African studies are concerned, could be identified. This situation created the opportunity to use a considerable number of international studies in order to guide this study which focusses on the South African trauma and emergency setting. Therefore, this literature review will consider the advantages of trauma and emergency advanced nursing practice within an international perspective, while considering dynamics of the trauma and emergency context specific to South Africa.

This literature review aims firstly to draw attention to trauma and emergency care in South Africa and the specialised skills of trauma and emergency nurse specialists. This is followed by the need for the optimal usage and advantages of these specialised practitioners in the trauma and emergency setting. Finally, the international challenges to the uptake of trauma and emergency advanced nurse practitioner's expanded skills are discussed.

The literature review is structured and presented under the following headings:

- Trauma and emergency care in South Africa
    - Trauma Society of South Africa (TSSA) accreditation
    - Resource challenges
- Burden of trauma/injury
- Burden of emergency
- Practice skills of trauma and emergency nurse specialists
    - Competency standards for emergency nursing
    - Scope of Practice regulation
- Utilisation of trauma and emergency nurse specialists
- Advantages of nurse specialists in trauma and emergency
- Factors influencing the implementation of expanded skills of specialised nurses

2.2 SELECTING AND REVIEWING THE LITERATURE

The initial search conducted on SUNSearch (Stellenbosch University Library and Information Service) indicated that relevant articles are produced by the following: CINAHL (Cumulative Index to Nursing and Allied Health Literature); EBSCOhost (Elton B Stephens Company research database); PubMed; Wiley Online Library and SAGE Journals. These databases were duly searched with the following keywords: trauma, injury, emergency, trauma and emergency nursing, burden of disease trauma and emergency, scope of practice nurse specialists, advanced nursing practice, trauma nurse practitioner, implementation of skills, knowledge transfer, barriers advanced nurse practitioners, challenges advanced nursing practice, multi-disciplinary teamwork trauma and emergency, and role nurse specialist to cover current knowledge about the research topic. Secondary sources identified in relevant articles were also searched.

Grey literature such as publications of the Western Cape Government Department of Health (2017, 2019) were used to illustrate the current healthcare needs and the importance of nurse specialist training in the Western Cape. Reports from the WHO (2014, 2016) and the IOM (2011) together with the Robert Wood Johnson Foundation were applied to position the nurse with specialised training at the centre of changes in healthcare delivery to meet healthcare demands.

2.3 TRAUMA AND EMERGENCY CARE IN SOUTH AFRICA

Trauma and emergency specialist nurses provide care within the structure and setting of specialised units. These units are dedicated to the initial triage and time-sensitive management of acutely ill patients entering healthcare services. Provision of care may be subdivided into specialised trauma units for the rapid care of patients with injuries resulting from incidents such as motor vehicle or pedestrian accidents; patients may have been victims of violence or high impact falls, to name just a few scenarios (Murphy *et al.*, 2019:2). Emergency units specialise in providing initial care for various medical conditions; for example diabetic and cardiac emergencies, as well as exacerbation and complications of chronic diseases such as HIV/AIDS, asthma and hypertension (Wolf, Brysiewicz, LoBue, Heyns, Bell *et al.*, 2012:175).

2.3.1 Trauma Society of South Africa (TSSA) accreditation

Public and private healthcare facilities are accredited by the Trauma Society of South Africa (TSSA). Accreditation, in terms of the Trauma Centre Criteria of the TSSA, is granted in accordance with the designated level of care that a specialised trauma or emergency centre can deliver (Hardcastle *et al.*, 2011:1). These authors state that standards of accreditation are based on the availability of required staff levels, medical equipment and those facility resources which are needed for the provision of quality care in a specific speciality. The system is structured around four levels of care delivery:

- Level I (major referral centre): Usually a tertiary hospital able to meet the requirements and needs for the total care of a patient, including prevention and rehabilitation. Resources are available around the clock in all major specialties.
- Level II (district hospital level): These provide 24-hour initial definitive care and common specialties are available.
- Level III (rural hospitals): Provide basic initial care including assessment, resuscitation and stabilisation, until transfer to a higher level of care can be arranged.
- Level IV (primary healthcare clinic): Basic life support provided prior to transfer for definitive care.

However, the structuring of trauma and emergency care and resource allocation depends on the system of service delivery of individual healthcare facilities. Many government hospitals at district level are staffed with junior-level physicians and lack adequate nursing staff and available specialist support. Most trauma units in South Africa's public hospitals attempt to deliver care while lacking the necessary medical equipment and properly trained staff who meet the standards of care applied in the developed world (Hardcastle & Brysiewicz, 2012:2).

Moreover, public hospitals are government-funded healthcare providers that serve growing volumes of vulnerable households that cannot afford private healthcare because of socio-economic deterioration in the Western Cape (WCDOH, 2019a:40).

2.3.2 Resource challenges

Discrepancies between mounting needs and declining resources lead to pressures on the levels of service offered by Western Cape government healthcare. Firstly, the rising trauma burden challenges theatre resources and compounds bed capacity predicaments (WCDOH, 2019a:36).

Secondly, the initial transport of up to 70% of all trauma cases to district level hospitals, where there are limited basic resuscitation capacities and after-hours imaging availability, cause a backlog of patients within the referral pathways (Hardcastle, Clarke, Oosthuizen & Lutge, 2016:182-183). Congestion and long waiting periods arise because of difficulties in the discharge and referral of patients, and lack of inter-facility transport (WCDOH, 2019a:36).

Thirdly, inadequate and inefficiently designed space is responsible for the further overcrowding that is an acknowledged reality in South African trauma and emergency units (Hardcastle *et al.*, 2016:182).

Lastly, these authors highlight that challenges relating to human resources present themselves in the form of inadequate staffing levels, a lack of experienced physician coverage and a lack of trained trauma and emergency nurse specialists (Hardcastle *et al*., 2016:182).

All these challenges cause crucial time delays in definitive care and management; these delays increase the severity of risks and the probability of complications in trauma and emergency cases (Hardcastle *et al*., 2016:183). Furthermore, Emergency Medical Services (EMS) require a police escort in dangerous areas, which significantly prolongs response time and total transport time to definitive care (WCDOH, 2019a:73). Complications, disease progression and acute decompensation attributable to the delayed management of trauma and emergency patients, all increase the need for high acuity care in intensive care units that are already capacity constrained (Hardcastle *et al.*, 2016:183).

2.4 BURDEN OF TRAUMA/INJURY

The global burden of injury was determined from the Global Burden of Disease study completed in 2013; that study indicated that sub-Saharan Africa contributes significantly to the burden of disease in trauma, where injury causes 9,6% of all deaths (Ologunde, Le, Turner, Pandit, Peter *et al.*, 2017:2010). The overall injury rate increased in southern sub-Saharan

Africa, specifically road injury, by 19,8% and injuries arising from interpersonal violence increased by 50% in the period 1990 – 2013 (Haagsma, Graetz, Bolliger, Naghavi, Higashi *et al.*, 2016:8). Healthcare organisations need to limit the disability and health consequences of violence and injury, in addition to taking preventative measures to decrease the prevalence of such incidents. Accessible, quality care management of violence and injuries reduces mortality, through the proper planning and structuring of trauma care systems. Moreover, these systems can limit disability and lessen the impact on the lives of victims (WHO, 2014:18). In South Africa, the real cost of trauma is increased, since the population groups most affected are the economically and socially active age groups, which account for most of the South Africa's youthful population (Hardcastle *et al*, 2011:189).

In South Africa, trauma units are often flooded with a wide range of injuries, including assaults inflicted in the context of community justice. These cases often present with severe multi trauma that is not specified in Global Burden of Disease statistics. In a study conducted by Herbst (2015:22) at a forensic pathology facility in the Western Cape, multiple injuries arising from community assaults accounted for 42% of these violent deaths. This finding provides a clearer picture of the high-acuity injury patients regularly seen at the Cape Metropole's trauma resuscitation units. Interpersonal violence against woman and rape pose another unique burden confronting emergency units in South Africa as gender based violence (GBV) contribute to significant healthcare challenges in sub-Sahara Africa (Muluneh, Stulz, Francis & Agho, 2020:15). Crime statistics as reported by the South African Police Service for 2019 indicate 52 420 sexual offence cases, 18 980 attempted murder cases, 21 022 murder cases, 162 012 common assaults and assault with the intent to inflict grievous bodily harm numbering 170 979 cases (Sicetsha, 2019).

A 2019 review of the burden of disease in the Western Cape provides a local perspective on trauma and injury statistics contributing to healthcare demands in the province. Deaths from intentional injury increased by 52% in males aged 15-39 years in 2016, when compared to statistics from 2009. Intentional injuries among males are now the leading cause of premature mortality of males of that age range in the Western Cape, overtaking HIV/AIDS and TB (WCDOH, 2019b:9). Firearm assaults are responsible for an increasing proportion of homicides, possibly because of an increased availability of guns in the province. Mortality associated with gunshot wounds doubled in the period 2010 to 2016, from 17 to 35 per 100,000 (WCDOH, 2019b:9). Mortality attributable to road accidents remained relatively constant between 2010 and 2016; causes were mainly non-compliance with speed limits, driving under the influence of alcohol, and unsafe public transport systems used by low-income road users both as passengers and pedestrians (WCDOH, 2019b:10). Furthermore,

the accumulation of lifelong adverse health effects, resulting from injury and violence, escalates the demands made on healthcare services. All forms of violence impact on, and change the lives of victims, families and society. A downward spiral instigated by violence continues and contributes to mental illness in the form of post-traumatic stress disorder, anxiety disorders, depression and suicide. Risky behaviours increase, such as smoking, illegal drug use and alcohol abuse; these further strain healthcare services with chronic diseases such as cancers, respiratory, liver and cardiovascular disease (WHO, 2014:6).

2.5 BURDEN OF EMERGENCIES

Brysiewicz and Bruce (2008:131) add to the picture of trauma in South Africa, described above in 2.4, by concurring that apart from severe injuries, the care of patients visiting emergency units is made more complicated whenever they have HIV/AIDS and tuberculosis as co-existing conditions. Acute admissions attributable to exacerbation and complication of infectious diseases represent another aspect of the disease burden to consider in providing emergency healthcare. HIV/AIDS and tuberculosis remain the leading causes of premature mortality in the Western Cape with an improvement in statistics levelling off since 2013. Because of poor retention rates, only about 60% of people living with HIV are on antiretroviral therapy (ART) in the province. As a result, many admissions to emergency units are because of HIV-related complications. Furthermore, when compared to other provinces, the incidence of HIV shows only a modest decrease in the Western Cape. The Western Cape still faces challenges in integrating HIV and TB with other services as well as with tracing, treating and retaining TB patients (WCDOH, 2019b:12).

Mortality in the case of non-communicable diseases has decreased to some extent since 2009, resulting in longer lifespans. However, patients living with chronic health conditions may substantially contribute to healthcare demands. Here, one can highlight diabetes as an example, since about 70% diabetics require acute care in emergency settings for uncontrolled glucose as it can lead to the life-threatening complication of diabetic ketoacidosis (WCDOH, 2019b:11).

Acute presentations of psychiatric conditions, followed by admission to emergency units, also contribute to the patient loads in acute care settings. This problem can be traced to social and structural difficulties in societies of the Western Cape (WCDOH, 2019a:11). Substance abuse contributes to the burden of emergency care when patients present with acute substance induced psychosis in emergency units (WCDOH, 2019a:37).

2.6 PRACTICE SKILLS OF TRAUMA AND EMERGENCY NURSE SPECIALISTS

High-quality and safe patient care depends on the emergency nurse's ability to rapidly identify clinical problems in patients who are essentially unknown to the healthcare providers while potentially acutely ill (Wolf & Delao, 2013:424). Moreover, safe trauma and emergency care depends on the experience, theoretical knowledge and practice skills of emergency nurses to prioritise and stabilise high acuity patients. These specialised skills and theory are mastered during their post-graduate training, enabling them to provide high-level nursing care in the trauma and emergency setting.

2.6.1 Competency standards for emergency nursing

Campo, Comer, Dowling Evans, Kincaid, Norton *et al.* (2018:241) state that in the United States, the emergency nurse practitioner (ENP) speciality requires speciality competencies that integrate advanced level skills that build on entry level practice. Practice standards for the ENP speciality lay the foundation for providing competent care and also create a framework to evaluate developing clinical skills from novice to expert.

Jones and Shaban *et al.* (2015) compared international practise and competency standards of emergency nurse graduates in Australia, Canada, New Zealand, United Kingdom and the United States. They found that all countries agree that theoretical principles must guide critical thinking and safe practice as a high priority. Australia, New Zealand and the United States require graduate level for emergency nurse studies to expand and extend their scope of practice; the rationale is that higher education nurtures higher cognitive skills which improve patient outcomes. Jones and Shaban *et al.* (2015:195) found that in all five countries, clinical expertise in the assessment, prioritisation of care and management, coordination and collaboration of the undiagnosed emergency patient were identified as a practice and competency standard for the emergency nurse. These descriptions of clinical expertise are reflected in the new emergency nurse competencies endorsed by SANC (2019a) for the future curriculum post-graduate study of nurse specialists in South Africa. It should be noted that the graduate prerequisite was not applicable to the study population of this study, who were trained under Regulation 212. However, the same assumed clinical expertise expectations guided their educational outcomes.

Wolf *et al.* (2012:179) found that in Africa, the expected knowledge and skill set for emergency nurses trained at post-basic level, entails being proficient in continuous assessment and advocating interventions, and being proficient in the provision and leading of advanced life support. Technical skills would include initiating interventions such as intravenous (IV) access and therapy as well as second line therapies.

The SANC defines competencies as a “combination of knowledge, skills, judgement, attitudes, values, capacity and abilities that underpin effective performance in a profession” (SANC, n.d.: 2). Trauma and emergency nurse specialists participating in the trauma and emergency setting would need to demonstrate a higher level of competency and skill that aligns with their level of education and training.

In 2019, the SANC released a description of the competencies for the speciality in emergency nursing (in line with current shift to use the term “emergency” to encompass both the trauma and emergency settings). This was done to formally endorse the previously assumed competencies of the trauma and emergency nurse specialists used in the Regulation 212 curriculum. Competency standards require advanced skills in critical thinking, decision making and clinical judgement supported by specific biomedical, technological and scientific expertise in the holistic care of the emergency patient (SANC, 2019a:11). Haemodynamic, biomedical and clinical effects of trauma and/or medical disease are monitored and managed at an advanced level. This includes specific skills such performing an assessment, through the primary survey of the trauma patient, that identifies and manages time-sensitive life-threatening injuries. One particular competency required in emergency specialist practice is fluid resuscitation (including massive blood transfusions) to manage hemodynamically unstable patients during the initial phases of shock. Prioritising of care is then supported by a secondary survey or head-to-toe assessment which is intended to detect further injuries, complications or chronic diseases. This is done after threats to life or limb have been identified and managed (SANC, 2019a:13-14). The interpretation of 12-lead ECGs will guide the basic and advanced life support measures required and will help in the identification and management of life-threatening dysrhythmias where the use of a manual defibrillator is expected (SANC, 2019a:12). Therefore, competency in advanced life support implies that the trauma and emergency nurse specialist is competent in advanced biomedical technology. This includes airway management with invasive and non-invasive equipment and nursing a mechanically ventilated patient. Arterial blood gas analysis and subsequent adjustment to mechanical ventilator settings to correct acid-base disturbances and respiratory parameters, are required competencies of emergency nurse specialists. These specific clinical skills and the use of biomedical technology require enhanced critical thinking and problem solving at a higher level than was required during basic training to become a professional nurse.

Likewise, non-clinical skills form part of the role of these specialists such as collaboration and communication within the multi-disciplinary team. Nurse specialists who act as role-models, change agents and specialist resource persons bridge the gap between evidence-based practice theory and the actual delivery of nursing care in the emergency setting (Emergency

Nurses Association, 2011:5). While reviewing the literature on these specific competencies, it became evident that the trauma and emergency nurse specialist should participate in expanded nursing practice that provides evidence-based, quality, safe and critical time-sensitive care. In addition, it can be expected that competency in more complex skills and nursing interventions, based on a deeper and broader theoretical foundation, should increase their contribution within the trauma and emergency multi-disciplinary team.

2.6.2 Scope of Practice regulation

The SANC Regulation No. R.2598 (SANC, 1984) prescribes that only those persons registered in a specific category may conduct certain actions, thereby regulating the practice of the professional nurse in South Africa. Esterhuizen (2016:14) explains that the SANC considers two categories in progressive nursing practice: the nurse specialist who obtained a specialised post-basic diploma and the advanced nurse specialist who contributes and partakes in the profession through formulating research and health policy and who has a master's level education.

The category of registration as a nurse specialist was created by a board notice published by the Minister of Health in the Government Gazette No. 368 of 15 May 2014. This acknowledges post-basic studies that require in-depth knowledge and expertise in a specific practice area. The Emergency Nurse's Society of South Africa (ENSSA) defines emergency nursing as a speciality that focusses on a patient's level of severity of injury or illness and time-sensitive interventions, in the emergency or critical phase of their injury of illness (Wolf *et al.*, 2012:175). This definition of the emergency nurse specialist remained unchanged in the SANC documents published in 2019 (SANC, 2019a:1).

The Scope of Practice of a nurse specialist falls under the umbrella of the legal scope of a professional nurse. Thus, the SANC prescribes no specific scope of practice for the nurse specialist despite different specialised nursing fields such as psychiatry, critical care, operation theatre or trauma and emergency. Bell (2005:30) clarifies by explaining that broad and flexible statements in the Scope of Practice allow for each professional nurse to apply these guiding principles to their own competency level, experience, further education, and within their employment setting. It must be noted that at the time of this research study, trauma and emergency nurse specialists were trained according to what would soon become the legacy R212 post-basic curriculum (SANC, 1997). This regulation prescribes educational requirements that allow registered nurses to register an additional qualification in a specified nursing field such as trauma and emergency and clearly indicates that nurse specialists should "define and accept responsibility for independent nursing practice" (SANC, 1997). However,

until this time, trauma and emergency nurse specialists have practiced without specific SANC-endorsed competencies that could guide interpretation of such independent practice or their Scope of Practice. This situation further complicated any policy development which could clarify the specific role expectations of trauma and emergency nurse specialists in the government sector. As from 2021, emergency nurse specialists will be trained according to a higher level curriculum in line with the higher education requirements, with SANC endorsed competency requirements published in 2019 (SANC, 2019a).

In the African context, Wolf *et al.* (2012:176) showed that in most settings, the Scope of Practice of emergency nurses has not been well defined. This increases the burden on the few trained emergency nurses who are forced to work outside their Scope of Practice because of task shifting. In a historical South African perspective on the professional nurse's scope of practice, Esterhuizen (2016:13) indicates that throughout history, traditional physician duties were transferred to nurses. The term 'task shifting' implies that specific physician tasks are delegated to a lower level of specialisation or to those categories of health worker with less training, such as nurses. Without standardised practice protocols, informal task shifting may lead to emergency nurses functioning outside their Scope of Practice. Dubree *et al.* (2015:45) emphasise that a proper understanding of the boundaries of the Scope of Practice of advanced practice registered nurses (APRN) was critical to the optimal utilisation, productivity and delivery of quality care. Furthermore, these authors highlight how important it is for all stakeholders in healthcare delivery to understand the framework of nurse education, with the addition of advanced clinical training in a particular speciality, in order to support and facilitate the Scope of Practice of APRNs.

2.7 UTILISATION OF TRAUMA AND EMERGENCY NURSE SPECIALISTS

An American study conducted by Collins, Miller, Kapu, Martin, Morton *et al.* (2014:353, 356) advocates that best practice in emergency care should integrate advanced nurse practitioners into the multidisciplinary team approach. These authors indicate that another motivation for utilising emergency nurse practitioners would be to improve access to emergency care. Trauma and emergency care in South Africa require an inter-disciplinary team approach to meet the demand for accessible and comprehensive healthcare. This calls for the recognition of trauma and emergency nurse specialists as being professional nurses in the emergency team who are qualified at higher level (Brysiewicz & Bruce, 2008:130). The IOM in conjunction with the Robert Wood Johnson Foundation produced a report on the future of nursing that focusses on how nurses lead change and advance health, thus playing a significant contribution towards the cost-effectiveness and quality of healthcare delivery. This report

highlights how important it is for nurses educated at a higher level to be utilised to their full practice capacity, as guided by their education and training (IOM, 2011:5).

2.8 ADVANTAGES OF NURSE SPECIALISTS IN TRAUMA AND EMERGENCY

Several international studies such as Sise *et al.* (2011:560) reported on the advantages of adding advanced practice nurses to the dedicated trauma team; this promoted the cost-effective organisation and use of trauma centre resources. America's healthcare reform encompasses optimal trauma care that is cost effective. Care processes and changes to providers' roles can increase value to institutions through the integration of nurse practitioners to deal with the shortage of physicians. This retrospective analysis reported that the introduction of advanced practice nurses to a Level I trauma unit in San Diego reduced cost of care by 30,4%, complications decreased by 28,4% and length of stay (LOS) by 36.2%. Continuity of care improved through the daily presence of advanced practice nurses as well as through improved communication between nurses and physicians about the planned care for each patient (Sise *et al.*, 2011:564). It was concluded that utilisation of advanced practice nurses in a dedicated trauma care unit enhanced quality and reduced care cost, thereby increasing the value at their Level I trauma centre (Sise *et al.*, 2011:566).

This finding was supported by another American single centre retrospective study by Collins *et al.* (2014:356). This study focused on the effect of acute care nurse practitioners (ACNP) on cost-effectiveness at a large academic Level I trauma centre. They showed that the ACNP forms an integral part of the multi-disciplinary team approach and this proved to be best practice in emergency care. Patient care goals could be achieved when the whole multi-disciplinary team is supported by the consistent availability of ACNP's to facilitate the discharge process, including patient and family education. This adds the advantage of the successful coordinator role for the care of patients. Thus, the length of stay was shown to decrease while staff satisfaction improved, together with increased patient safety, satisfaction and quality of care. Resident physicians were able to give attention to procedures and admissions in the trauma unit, while an ACNP was available to ensure that other patients could be prepared for discharge (Collins *et al.*, 2014:356).

In a study conducted in Pennsylvania, Morris, Reilly, Rohrbach, Telford, Kim *et al.* (2012:478) compared the care provided by unit-based nurse practitioners to resident-run trauma services. Their results suggested that the care provided by nurse practitioners was clinically equivalent to that provided by medical residents. Additionally, nurse-led services were shown to result in a decrease in patient days in hospital. This decrease would counteract the cost of training and hiring these NP's.

A similar study took place in West Virginia at another Level I trauma centre where the services of trauma nurse practitioners were expanded to improve continuity of trauma care and patient outcomes (Holliday, Samanta, Budinger Hardway & Bethea, 2017). The results of this study support the findings of previous studies showing that the length of stay in the hospital and critical care unit length decreased. Moreover, there were decreases in the rates of rehabilitation, consultation, re-admission in 30 days and missed injuries. Reductions in rates of clinical complications such as deep vein thrombosis and pneumonia were also reported. These authors conclude by recommending expanded nurse practitioner models in acute care settings with high volume trauma services (Holliday *et al*., 2017:369).

As far as could be ascertained, no South African study purposely measured the advantages or uptake of nurse specialists in the trauma and emergency specialty. However, Brysiewicz and Bruce (2008:130) indicate that the absence in South Africa of a skill mix workload model creates a situation where emergency nurses are forced to practice with inadequate training. Hardcastle and Brysiewicz (2012:2) further state that most emergency centres remain without standards of care on a par with those of the developed world, in terms of human resources and equipment.

2.9 FACTORS INFLUENCING THE IMPLEMENTATION OF EXPANDED SKILLS OF SPECIALISED NURSES

The global need for nursing care at an advanced level calls for the expansion of opportunities for advanced practice nursing. Unfortunately, it is recognised internationally that the ability of advanced practitioners to practice to the full extent of their level of training and education remains restricted (Kleinpell *et al.*, 2014:1).

Kleinpell *et al*. (2014) compared the barriers identified as related to various aspects of advanced nursing practice in the United States, Australia, Israel, Saudi Arabia, United Kingdom, Canada and China. Similar challenges were noted with regard to the practice of the advanced practice nurses. These included insufficient advanced nursing education, a lack of standardised educational requirements, an undefined Scope of Practice and independent practice authority barriers, a lack of role recognition and a lack of understanding of the role of advanced nurse practitioners (Kleinpell *et al.*, 2014:9). Additionally, several studies indicate that physician barriers exist in respect of the implementation of nurse specialist skills (Dubree *et al.*, 2015:45; Kleinpell *et al*., 2014:6; Sullivan *et al.*, 1978:1098). Dubree *et al*. (2015:45) suggest that physicians might perceive the advanced nurse practitioner as a being a threat to the integrity of medicine practice, as well as being economic adversaries.

Prohibitive legislation restricts the practice of emergency nurses with detrimental consequences for healthcare users in emergency settings with already-limited resources (Brysiewicz & Bruce, 2008:130). Furthermore, a 2010 report from the IOM and the Robert Wood Johnson Foundation (IOM, 2011:5) recognises that the Scope of Practice regulation of specialist nurses is overly restrictive, and a serious barrier to accessible care.

Although financial investment has been made in training trauma and emergency nurse specialists in order to address the healthcare needs of South Africa, this role has not been facilitated by legislation and practice policies (Brysiewicz & Bruce, 2008:130). Wolf *et al.* (2012:176) found that in most settings in Africa, the Scope of Practice of emergency nurses has not been well defined. The SANC does not prescribe a specific Scope of Practice to regulate the practice of nurse specialists. Therefore, the Scope of Practice of a nurse specialist is governed by individual interpretation and integration of expanded skills, competencies and knowledge within the legal scope of a professional nurse (SANC, 1984).

Wolf *et al*. (2012:175) acknowledge that emergency nursing practice is a challenge world-wide, but they state that it is particularly challenging in Africa where medical facilities cover large catchment areas with limited human and facility resources, combined with a lack of standardised protocols and practice. Sub-Saharan Africa carries 24% of the global burden of disease but has only 3% of the world's healthcare workers. From this shortfall in healthcare workers, a clear picture of critical shortages in human resources of emergency centres emerges (Sakran *et al.*, 2012:4). Furthermore, the provision of patient-centred and quality healthcare is the biggest unintentional casualty when healthcare staff work in overburdened settings with limited resources. This may result in staff mechanically doing their tasks and prioritising clearing crowds, rather than providing appropriate patient centred care (WCDOH, 2019a:155).

2.10 CONCLUSION

Nurse specialists in trauma and emergency are competent in specialised skills and as such, could support the multi-disciplinary team to deliver safe, quality and accessible healthcare. However, they need to practice to their full potential of training and education to optimise the value of their enhanced knowledge and skills. Transformation of healthcare service delivery aims to meet the demands of the ever-changing healthcare landscape. The advantages of using nurse specialists in trauma and emergency settings highlight the potential of this human resource in meeting healthcare demands, increasing access to trauma and emergency care, and addressing the quadruple burden of disease in the Western Cape. In South Africa, questions regarding the expansion of nursing practice through the uptake of the specialised

skills offered by nurse specialists have not received the same attention as on the international front. This calls for an improved understanding of the barriers and facilitators that trauma and emergency nurse specialists face in striving to implement their specialised skills in practice. The following chapter will elaborate on the methodology that was implemented for this study.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

Chapter 3 provides a comprehensive discussion of the research methodology and processes that were implemented in this study to investigate the perceptions of trauma and emergency nurse specialists regarding the factors that either hinder or facilitate the implementation of their specialised skills in practice. Chapter 3 elaborates upon the brief summary provided in Chapter 1, which gave an overview of the research design, sampling from the population and collection of data along with data analysis.

3.2 AIM AND OBJECTIVES

The researcher aims to explore and describe the perceptions of trauma and emergency nurse specialists regarding the factors that either hinder or facilitate the implementation of specialised skills in their practice within the public health sector within the Western Cape Province. By means of exploration and description, the researcher will aim to improve awareness and understanding of implementation issues related to specialised skills acquired by trauma and emergency nurse specialists.

- To explore and describe the perceived facilitators regarding the implementation of specialised skills by trauma and emergency nurse specialists in their practice within the public health sector of the Western Cape Province
- To explore and describe aspects that act as barriers relevant to the implementation of specialised skills by trauma and emergency nurse specialists in their practice within the public health sector of the Western Cape Province

3.3 STUDY SETTING

Grove *et al.* (2015:38) define a research setting as being the environmental background where the research study will be carried out. This study was conducted with participants employed at two public hospitals in the Western Cape province of South Africa. Thus, participants were sourced from one tertiary hospital with a level I and a district hospital with a level II trauma and emergency service in the Cape Metropole. These two hospitals were selected to provide a variety of experiences encountered by trauma and emergency nurse specialists in implementing their specialised skills at different levels of trauma and emergency care.

A tertiary hospital in the public sector of the Western Cape represents a centre of excellence with highly specialised expertise and it provides a learning platform with affiliated educational institutions. The tertiary hospital selected as a research setting is the largest hospital in the Western Cape and was opened in 1976 (Western Cape Government (WCG), 2016). It provides comprehensive services to more than 3.4 million people in its catchment area in the Western Cape. The statistics for 2016 indicate annual admissions exceeding 107 215, with more than 492 670 outpatient visits to the hospital (WCG, 2016). Moreover, it is one of the two tertiary hospitals in the Cape Metropole with level 1 trauma and emergency centres. A level 1 trauma and emergency centre acts as a major regional referral centre with all specialities involved in trauma and emergency care available 24 hours a day (Hardcastle *et al*., 2011:190).

The district hospital's trauma unit is accredited as a level II unit and as such, is equipped to provide 24 hours initial definitive care for injuries of all severities, but refers complex cases requiring critical care management to a level I centre (Hardcastle *et al*., 2011:190). The district hospital selected for this study opened in 2012 and provides services to a significantly growing population estimated to be about 500 000 at present. The drainage area for this district hospital can be characterised by the high prevalence of trauma, motor vehicle and pedestrian accidents, interpersonal violence and health service needs inherent to informal settlements. Furthermore, a large proportion of the population is unemployed, with a high prevalence of TB, HIV, diabetes and hypertension contributing to the service pressure in the emergency centre. Difficulties in retaining specialised nurses in this hospital have been mentioned in reports, and this problem influenced the decision to select this hospital for inclusion in this study, and thereby provide an alternative perspective in research settings (Parliamentary monitoring group (PMG), 2018). Another factor that influenced the selection of this district hospital was that their trauma and emergency unit is 30% larger than what is currently the standard for a district hospital in the Western Cape (WCG, 2012).

The selection of research settings may be influenced by the availability and number of participants who meet the inclusion criteria of a study (Grove *et al.*, 2015:277). The selection of the tertiary hospital was based on the number of trauma and emergency nurse specialists employed there, which exceeds the number of these specialists employed at the other tertiary hospital's level 1 trauma centre. This factor also influenced the selection of the district hospital, since that hospital employs the most trauma and emergency nurse specialists in the Cape metropole.

Another aspect of the research setting involves the site of the actual interviews with participants. This study was conducted in accordance with COVID pandemic restrictions and attempts were made to decrease the exposure risk to both the researcher and the participants.

Hence, implementing online video calling to conduct interviews resulted in participants being able to take their call at any time and place of their convenience. Most participants chose to conduct these calls at their homes, where they could ensure anonymity by not being overheard by their colleagues and employer. Furthermore, they anticipated fewer disruptions and distractions when they could manage their environment at home for their calls. The researcher did not manipulate any aspects of their preferred setting, with data collection interviews thus being conducted in natural settings (Grove *et al.*, 2015:276).

3.4 RESEARCH DESIGN

Atkins, Francis, Islam, O'Connor, Patey *et al.*, (2017:7) draw attention to the importance of considering both the research question and the availability of knowledge on the research topic when choosing a study design. As mentioned previously, no research-based information could be perused by the researcher on trauma and emergency nurse specialists' practice barriers and facilitators in South African trauma and emergency care. This shortage called for greater detail and richer narratives of experiences as endorsed by qualitative research methodology. Furthermore, it allows for the elaboration of experiences from the perspective of individuals in the setting being studied (Grove *et al.*, 2015:67). The specific nature of the trauma and emergency discipline and the environment in which the trauma and emergency nurse specialist practices, call for a methodology that allowed participants to share their perspectives as they practice in this dynamic milieu. A qualitative research design allowed the researcher to share, for a moment, a partial view of the world where trauma and emergency specialists work, and the meaning they attach to their specialised practice experiences.

Analysis of the words of participants, and finding significance in them, can generate rich portrayals of their experiences which can enhance one's understanding when little is known about a topic (Atkins *et al.*, 2017:7). Therefore, exploring and constructing the meaning of the participants' words was the first step towards answering the research question on the perceptions of trauma and emergency nurse specialists regarding the factors that hinder or facilitate the implementation of their specialised skills. Descriptive reporting of their experiences was based on the purpose of qualitative research, which is to understand and reflect the insiders' perspective and how they interpret and make meaning of their specialised practice. The direct quotes made by the participants portray the unique practice context of trauma and emergency nurse specialists and these supported the descriptive character of qualitative inquiry (Merriam & Tisdell, 2016:15–18).

An exploratory-descriptive design was used in this research to investigate and describe the perceptions of trauma and emergency nurse specialists about the factors that hinder or

facilitate the implementation of specialised skills in their practice. The disposition of the research question required a design that could explore the conditions and setting where these specialists practice and then generate data to describe factors that shape the application of their specialised skills. Conducting an exploratory-descriptive strategy facilitated insight into the challenging and enabling experiences of trauma and emergency nurse specialists in their specialised practice. Moreover, knowledge of implementation issues relating to the specialised skills of trauma and emergency nurse specialists addressed the initial concern regarding optimal use of their expanded training capacity. As advised by Grove *et al.* (2015:77), the results generated by an exploratory-descriptive study can be applied to a problem originating from the practice that prompted the investigation. Recommendations based on the results of this study can be applied to help to obtain the optimal use to the full extent of the trauma and emergency nurse specialist's training.

3.4.1 Philosophical worldview

Worldviews influence the practice of research through the researcher's beliefs concerning the world and research (Creswell & Creswell, 2018:44). The philosophical worldview that guided the research process of this study aligned with the assumptions of the social constructivist paradigm as underpinned by traditional naturalistic inquiry of qualitative research methodology (Kivunja & Kuyini, 2017:33; Merriam & Tisdell, 2016:12). Social constructivists consider the unique meanings individuals assign to their occupation and existence. Furthermore, individuals ascribe personal meanings to experiences that are multifaceted and require social mediation (Creswell & Creswell, 2018:46). Exploring the perceptions of trauma and emergency nurse specialists regarding facilitators of, and barriers against, the implementation of their specialised skills, allowed them to share the complex meanings they constructed through their interaction with others in their practice environment. Making sense of how participants give meaning to their specialised practice realities are compatible with concepts of interpretivism (Merriam & Tisdell, 2016:9; Kivunja & Kuyini, 2017:33; Creswell & Creswell, 2018:45). The purpose of social constructivists is to explore, interpret and describe various realisms in a specific context from the perspective of the participants (Merriam & Tisdell, 2016:12) and that mindset aligns with the objectives of this study. Moreover, a constructivist worldview assume that interpretation of findings are shaped by familiarities, expertise, values and the background of the researcher (Creswell & Creswell, 2018:46).

3.4.2 Elements of social constructivist paradigm

The following elements shaped the research methodology as described by Kivunja and Kuyini (2017:33). The researcher constructed knowledge socially through the process of interaction,

questioning and listening, together with the cognitive processing of this dialogue about the participants' perceptions and experiences. Furthermore, practice experiences were informed by their authoritative knowledge of trauma and emergency aligned with the element of subjectivist epistemology. The nature of reality assumed relativist ontology as the researcher explored and constructed meaning from the multiple realities of trauma and emergency nurse specialists as they perceive and give significance to their subjective practice experiences. Data collection took place by means of interviews where the researcher also participated and interacted in the discussion. Thereby, the research question could be answered and contributed to knowledge by exploring and creating meaning from the practice perceptions reported by trauma and emergency nurse specialists.

3.5 POPULATION AND SAMPLING

A population is defined by LoBiondo-Wood and Haber (2014:232) as a group that can be characterised by stipulated attributes. These individuals are the focus of the research study and were selected because they are able to provide insight into the research problem (Grove *et al.*, 2015:250). In this study, the population consisted of professional nurses who are registered with the SANC as nurse specialists after completing post-basic training in Medical and Surgical Nursing Science: Trauma and Emergency. The SANC registration reflects a total of 830 trauma and emergency nurse specialists in South Africa, but does not indicate the number for each province (SANC, 2019b:3). A total of 24 trauma and emergency nurse specialists are employed at the tertiary hospital, and 9 at the district hospital (Olivier, 2019).

The process of sampling calls for a representative subsection to be selected from the population (LoBiondo-Wood & Haber, 2014: 234). Moser and Korstjens (2017:10) encourage a sampling strategy that will recruit participants who can provide the richest perspectives and descriptions on the research topic. Purposive sampling complements qualitative research design, since the researcher is interested in the experiences reported by a specific group of individuals (LoBiondo-Wood & Haber, 2014:238-239). The researcher used a maximum variation purposive sampling technique as advised by Neergaard *et al*. (2009:2). This technique was chosen as it would access diverse participant demographics in terms of gender, experiences and various trauma and emergency settings. Such diversity would facilitate a variety of descriptive data and deeper insights. Maximum variation was attempted by recruiting participants from two levels of trauma and emergency services while a variation in the different trauma and emergency units was included in the selected sample. Furthermore, in recruiting participants, gender was considered with inclusion of both males and females in the selected sample. Purposive sampling allowed the researcher to focus on the study participants' unique insights and training as trauma and emergency specialists in various settings within the trauma

and emergency discipline. This enabled the researcher to recruit participants who were knowledgeable about the specialised skill sets of trauma and emergency nurse specialists. Moreover, the selected participants were willing and able to provide comprehensive descriptions of their experiences in implementing their specialised skills in practice. However, COVID-19 led to lockdown restrictions on visiting healthcare facilities for research purposes and this led to the need for snowball sampling; here, some trauma and emergency nurse specialists provided information about other potential participants who could be approached to participate in the study. Networking within the small and exclusive population of employed trauma and emergency nurse specialists provided the additional advantage of being able to select the typical as well as the atypical participant as described by Grove *et al.* (2015:270).

The sample size in qualitative research is small, and data collection can be regarded as completed when no new information is generated which would promote additional understanding of the phenomenon being studied (Moser & Korstjens, 2017:10). The researcher anticipated that a sample comprising between ten and twelve participants, as recommended by Moser and Korstjens (2017:11), would be sufficient to achieve data saturation. Data collection continued until data saturation was achieved, with ten interviews providing enough rich data to meet the outcomes of the study.

3.5.1 Inclusion criteria

Professional nurses who have:

- Registration with the SANC as a nurse specialist and who hold a post-basic nursing qualification in trauma and emergency nursing science
- All permanent employment in the trauma and emergency units of the one tertiary and one district hospital selected for the study, regardless of years of experience

3.5.2 Exclusion criteria

- Agency staff registered with the SANC as trauma and emergency nurse specialists: these nurse specialists would not have been subjected to the same determinants of practice behaviour over a representative period of time since they move between different external environments such as the public and private healthcare sectors
- Staff on leave such as maternity, study and annual leave during the period of data collection

3.6 DATA COLLECTION TOOL

Qualitative research typically involves collecting data by means of face-to-face interviews, with the aim of understanding and portraying the meaning that participants give to life experiences (Moser & Korstjens, 2017:12). The ability of the researcher to act in response and adjust immediately during interviews will support the researcher's primary instrumental role in data collection in qualitative research (Merriam & Tisdell, 2016:16). Unfortunately, South Africa entered a nationwide lockdown on 26 March 2020 when President Cyril Ramaphosa declared a national state of disaster. A strict lockdown was instituted as part of efforts to curb the rapid spread of the Coronavirus in the country. Nobody was allowed to leave their homes or travel except under strictly controlled circumstances (South African Government, 2020). This initial 21-day lockdown was extended to the end of April 2020 by the National Coronavirus Command Council (South African Government, 2020). On 1st of May 2020 South Africa moved from alert level 5 to level 4 in a risk-adjusted strategy to allow for a gradual easing of restrictions, but all non-essential travel and work remained limited (South African Government, 2020). After ten weeks of strict lockdown, the country was downgraded to alert level 3 on 1st June 2020 when some movement of people was allowed (South African Government, 2020.) These extraordinary COVID-19 pandemic lockdown regulations meant that a data collection method was needed that would safeguard both the participants and the researcher against the COVID-19 virus while complying with the strict travel restrictions.

Data was therefore collected by interviewing participants using real-time online video calling. This change to the traditional approach of interviews embraces technology and virtual communication, and is supported by researchers internationally. Krouwel, Jolly and Greenfield (2019:7) justify the use of virtual interviews in special circumstances where face-to-face interviews are unfeasible, or when restrictions deter the completion of a research study. This study compared face-to-face interview modes with video calling in an exploratory comparative analysis. The findings suggest that face-to-face interviews are only marginally superior and it is concluded that other constraints may well justify the use of online video calls.

The researcher found that this alternative method of interviewing reduced the role confusion that could have arisen from the researcher not acting in the capacity of an educator; here, it should perhaps be noted that six participants received their education from the researcher. Moreover, it allowed participants to share their experiences more freely and willingly. Reflection and participant feedback after the pilot interview revealed that changing the environment and method of interviewing from face-to-face to online, helped to prevent the participants from feeling that they were being evaluated for an assessment. This sentiment was also reported by other participants during data collection. Furthermore, it supported the

role of the participant as the expert in their experiences as a trauma and emergency nurse specialist, while the educator now took the role of the receiver of their knowledge.

Cropley (2019:69) explains that interviews facilitate the open and comprehensive sharing of the respondent's construction of reality from their lived experiences. Yin (2011:135) and Brinkmann and Kvale (2015:6) add that the researcher uses interviews as a directed effort to create an awareness of the world of the participant through the significance of their words and phrases. In this study, the research objective is to explore and describe the perceived facilitators of, and barriers against, the implementation of specialised skills by trauma and emergency nurse specialists in their practice. This objective can be achieved by collecting data during interviews. The experiences of trauma and emergency nurse specialists when utilising their specialised skills in their practice, construct their reality about this phenomenon. Through their words and expressions, the researcher could develop an insight into, and awareness of, their world of being a trauma and emergency nurse specialist with specialised skills practicing in a unique environment. Thus, interviews with trauma and emergency nurse specialists allowed the researcher to explore their world through the lens of their unique experiences and perceptions of their reality.

A semi-structured interview guide was implemented and is appended to this report as Appendix 1. The interview began with one broad question about the respondent's experiences in implementing their specialised skills in their practice. This was followed by broad questions on facilitators and barriers, depending on the respondent's spontaneous narrative after the first question. Probing questions were asked to clarify reported experiences and to elicit rich descriptions. Denzin and Lincoln (2018:1002) reason that semi-structured interviews have the potential to create knowledge from discourses, by allowing more flexibility to reflect and clarify those perspectives that participants consider to be significant. These authors mention another dimension of a semi-structured interview: it gives the researcher more opportunity to act as a knowledge co-creating agent during the dialogue, instead of simply asking predetermined questions. This interactive creation of knowledge allowed the researcher to direct the discussion to significant issues raised by the interviewee and to assemble data aimed at the outcomes of the research study.

Already during the pilot interview, the researcher noticed spontaneous fluctuation in the respondent's narrative between perceived facilitators of and barriers against the application of specialised skills in practice. This trend continued in the following interviews, where the advice of Roller and Lavrakas (2015:53) was followed when questions were modified for each respondent as merited by specific responses or references to specific skill sets and situations in the trauma and emergency discipline. Furthermore, the leeway in the interview process

helped the researcher to hear the voices of the participants and allowed for clarification when the researcher reacted to specific comments or scenarios described by them. Wherever a participant did not spontaneously share their distinct experiences of facilitators or barriers respectively, a broad question was implemented to guide that interviewee to address that specific outcome of the research study.

Open-ended questions from the semi-structured interview guide were asked in English. The participants were government employees conversant in English, as it is the official language of communication in the government sector in the Western Cape. Open-ended questions allowed for deeper insights into the responses of participants, providing the researcher with richer data to explain the meaning and motivation of responses. It also allowed the researcher to engage actively with participants while they expressed their views in their own words (Singer & Couper, 2017:128). Interviews started by welcoming the participant and expressing appreciation for consenting to the interview. The participant was encouraged to share experiences without considering 'right' or 'wrong' answers, as the researcher was interested in learning about their individual perceptions and thoughts. A codename was given to each participant. The core discussion then followed with the first broad questions based on the objectives of the study. The participant was encouraged to share anything they wanted to, regarding their experiences in implementing or using their specialised skills as a trauma and emergency nurse specialist in their practice.

Participants were allowed to spontaneously describe their perceptions of the utilisation of their skills without limiting the discussion either to facilitators or barriers. The researcher then posed reflecting and probing questions to clarify the participant's own perspective and opinions. Some closed-ended questions were asked to control and direct the flow of dialogue, followed by a request to elaborate. The interview was concluded by a reflection of the main thoughts of the participant and by the researcher expressing gratitude for the participant's willingness to share their experiences. Interviews were booked for one hour, and actual interviews lasted between 40 minutes and a full hour. Shorter interview duration could be ascribed to the sharing of the consent and information link a few days prior to the booked interview, and participants conveyed strong opinions since they had given prior thought to what they intended to say.

3.7 PILOT INTERVIEW

The researcher conducted one pilot interview with a trauma and emergency nurse specialist from the tertiary hospital. Before that interview, the researcher received training in interviewing skills and practiced the skills of reflection, summarising and control of the interview from experts in qualitative interviews. A pilot interview may indicate questions that need to be

reformulated and may also confirm the relevance of the content (Moser & Korstjens, 2017:14). The pilot interview confirmed that the questions in the semi-structured interview guide provided rich data to answer the research question and to assist in meeting the outcomes of the study. However, it was decided that some flexibility should be allowed to improve the flow of dialogue and to allow participants to fluctuate spontaneously between the facilitators and barriers they experience in their specialised practice.

On reflection, the researcher acknowledged that the participant was clear concerning her roles as the authoritative expert in trauma and emergency practice. She was also clear about the role of the researcher as being the recipient of her experience dialogue. Moreover, the researcher was able to focus and hear the sense that the participant made of the world she practiced in. This was without bias arising from the researcher's role, mentioned in 3.6 above, as educator of the trauma and emergency post-basic course. It was noted that the participant shared her perceptions through the use of actual scenarios from practice experiences related to the discipline of trauma and emergency nursing. The unexpected sharing of actual practice scenarios facilitated knowledge construction through story telling. Furthermore, it allowed the researcher to play a role in the participant's sense-making of those experiences, with the use of reflecting during the interview. The data shared during the pilot interview was used to contribute to the essence to the study, because no changes to the questions in the interview guide were found to be necessary.

3.8 TRUSTWORTHINESS

Lincoln and Guba (1985:290) attempted to address the issue of how a researcher can convince an audience that their research findings are accurate and trustworthy. Likewise, Creswell and Creswell (2018:274) encourage the researcher to vigorously integrate validity tactics throughout the research process. Based on the work of Lincoln and Guba (1985), the application of the criterion of trustworthiness will be discussed in terms of credibility, transferability, dependability, confirmability and reflexivity.

3.8.1 Credibility

This benchmark of quality is concerned with the truthfulness of the research finding in terms of the portrayal being true to the participants' primary views (Korstjens & Moser, 2018:121). The researcher applied the following attributes of credibility as advised by Korstjens and Moser (2018:121-122).

3.8.1.1 Prolonged engagement

The researcher allowed enough interview time for each participant to feel unhurried in expressing their views and experiences. The provision of adequate time facilitated clarification and enabled the researcher to become acquainted with the data embedded in the participant's dialogue. By allowing sufficient time, participants were able to vividly describe the context of their practice experiences, often reverting to enthusiastic descriptions of scenarios inherent to the discipline of trauma and emergency nursing. Furthermore, the willingness of the researcher to listen gave value to what and how participants were sharing and empowered them to share their views and experiences generously while feeling safe.

After one particularly long interview, the participant expressed appreciation for the opportunity to share experiences honestly with an attentive validating listener. Most participants mentioned after their interview that they felt privileged to express themselves without restrictions on a topic that they are so passionate about, yet nobody ever asked them about it. Therefore, the researcher concluded each interview with a last opportunity to add anything, in order to convey the message that the participant was in control of the interview's pace and duration.

3.8.1.2 Persistent observation

Interviews of the participants were guided towards the elements relevant to the purpose of the study. Probing and reflection took place after the broad questions were asked, to focus on factors that the participant perceived as supporting or hindering their trauma and emergency specialist practice. Moreover, the focused nature of qualitative interview techniques was applied to delve deeper into significant practice meanings constructed by the participants. Korstjens and Moser (2018:122) add another dimension of persistent observation that was embraced in this study when the researcher immersed in the intricacies of data and creating codes to capture the traits of the data.

3.8.1.3 Peer debriefing

Throughout the research process, the researcher consulted the study supervisor and co-supervisor who provided expert feedback to advocate for the quality of the qualitative study. Moreover, the researcher involved expert colleagues in discussions regarding research decisions and reflection on the process, in order to ensure the observance of quality criteria of a credible study. Preliminaries of all research steps were reviewed by study supervisors to support credible findings that reflected in the complexity of data collected.

3.8.1.4 Member checking

Firstly, the researcher used reflection and some closed-ended questions throughout the interviews to confirm understanding of the information provided by participants. Subsequently, *verbatim* transcripts were given to each of the ten participants so that they could check the wording and indicate whether it was an accurate reflection of what they expressed. Finally, they were encouraged to suggest some refinements to improve the representation of the meanings they intended to share (Merriam & Tisdell, 2016:246). Feedback was received from eight participants, who confirmed the authenticity and accuracy of the transcripts. Member checking enabled the researcher to add content where aspects were not clear.

3.8.2 Transferability

Meticulous reporting of experiences within a given context provides meaning to the audience and allows the reader to make a judgement about the degree of transferability (Korstjens & Moser, 2018:121). Tracy (2010:845) goes further in stating that transferability creates a vicarious experience for the reader by means of an instinctive understanding of the content, which they recognise and resonate with their own context. The researcher valued and encouraged the detailed description of context where the trauma and emergency nurse specialists practice, and noted how they construct the significance of aspects that influence the application of their specialised practice. Moreover, the procurement and analysis of the data provided the basis for the substantiated discussion of the research findings. These findings have the potential to resonate across various populations and contexts, especially taking into account the authenticity provided by the direct quotes of the participants, interlinked with rich and detailed descriptions to be presented in Chapter 4.

3.8.3 Dependability

Dependability exposes the time-dependant consistency of the data as the researcher implements data analytics according to the conventional standards for a specific research strategy. The researcher spent time actively immersed in the philosophical paradigm of qualitative research design and by doing so, was able to align all research activities to meet the study outcomes in accordance with accepted conventions of this specific approach to research. Furthermore, this process was supported in this study by the explicit description of research steps (Korstjens & Moser, 2018:121-122). Conforming of the study findings with collected data consolidates the dependability of this study, as reasoned by Merriam and Tisdell (2016:252).

3.8.4 Confirmability

This criterion is aligned by Korstjens and Moser (2018:121) with data analysis through the meaning-making process, and relates to the impartial reporting of the verifiable essence of data. The researcher used complete co-coding of transcripts through the use of an independent coder to confirm that the thematic analysis reflected the views of the participants and was true to their shared experiences. Furthermore, confirmation of research findings was facilitated by transparent and continuous record keeping of the research process. This audit trail enabled the study supervisors and an independent expert auditor in the field of qualitative research auditor to examine issues critically and to validate that the techniques employed in the research process conform to quality research indicators.

3.8.5 Reflexivity

Korstjens and Moser (2018:121) advocate for critical self-awareness from the researcher in respect of preconceived ideas and biased assumptions. These authors also encourage reflective practice throughout the implementation of the research process in order to consider relational aspects that influence a participant's responses. Special consideration was duly given to the researcher's bias and preconceived ideas, based on her educational background. The researcher honestly reflected upon and acknowledged the belief that the specialised skills of the trauma and emergency nurse specialists should be valued and considered as being pivotal to the delivery of quality trauma and emergency-specific care. This insight was considered to be significant as there was a need for the researcher to refrain from displaying any disapproval or disappointment during interviews. Any such perceptions in the mind of the respondent could potentially create feelings of being a failure and could prevent them from sharing perceived barriers to the implementation of their specialised skills. The researcher reflected on the dynamics regarding the loss of actual face-to-face interaction during interviews. However, it was concluded that this loss of interaction actually supported spontaneous and honest sharing, since it narrowed the power difference between previous students, and even with other interviewees, where an educator could potentially be perceived as an authority figure. Furthermore, the researcher recruited an independent expert in the field of qualitative research to audit the pilot interview and subsequent research processes to prevent any researcher bias that might compromise the validity of the study.

3.9 DATA COLLECTION

Moser and Korstjens (2017:12) view the purpose of qualitative interviewing as being to collect accounts of significant topics in the participant's world and to create meanings from what they articulate. With this purpose in mind, the researcher approached potential participants through WhatsApp and telephone calls. Once they communicated interest and willingness to participate, a Google link was shared with them on WhatsApp chat. This link directed them to the Google form created by the researcher with the study information and allowed them to complete the online consent. Responses were automatically added to the Google form on the researcher's Google drive that is password protected and accessible only on password protected devices. Participants were then reimbursed for their time and data usage with a once-off R100 data bundle that was loaded to their service provider through internet banking. Calls for interviews were arranged to be at a convenient time for participants, and the researcher allowed flexibility in bookings to accommodate night duty and the long shifts of participants.

Interviews were conducted in real time during a synchronous online call discussion, either in a private setting at home or at a place of the participant's choice, where distractions during the call would be minimised. The choice of the participant was supported and guided by the investigator as being the least intrusive to the privacy of the participants.

Interviews were captured by means of audio recordings with two separate devices to cover for the possibility of technical failures. The audio quality was given preference during interviews whenever difficulties in connectivity were experienced. The participants' interview recordings and transcriptions were only identified by means of an allocated codename while the original code allocation list was stored on a separate USB in a password protected file to protect the identity of participants and hospitals. Reflective notes were written immediately after each interview to enhance the quality of descriptions of participants. Participants were also only referred to by their codenames in these reflective notes.

As mentioned previously, there has been an educator-student relationship between the researcher and some of the participants. The potential increases to interview participants during qualitative research in very small specialised areas where a pre-existing relationship exist (McConnell-Henry, James, Chapman, Francis, 2009:2). As previously mentioned, a total of only 33 trauma and emergency nurse specialists were employed at the two hospitals. The selected sample included six participants who received their post-basic training directly from the researcher as a lecturer since 2017. Inclusion of these participants was needed to allow for a fair chance to participate in the study, based on the inclusion criteria, and to collect enough data to reach data saturation. It was felt that the pre-existing relationship of lecturer

and student could potentially influence the quality and quantity of data provided by the participants. Therefore, special considerations were implemented by the researcher as advised by McConnell-Henry *et al.* (2009:5) and Asselin (2003:101). These authors refer to the situation where the participant is known to the researcher before the interview and state that the researcher must put emphasis on clearly stating, before the interview, the intentions, role and functions of the researcher, study aim and interview objective. Moreover, these concepts must be re-iterated during the interview. It was made clear before the start of interviews that the researcher was only interested in the distinctive experiences of trauma and emergency nurse specialists in implementing their specialised skills of in their practice. To clarify any role confusion based on the pre-existing relationship of lecturer and student, the researcher reiterated that there are no 'right' or 'wrong' answers to questions during the interview. Furthermore, the role of the participant as the expert in their experiences was clearly stated and reinforced, as advised by McConnell-Henry *et al.* (2009:3).

The researcher found that those interviews with participants previously known to her, provided more specific data that related to very specific specialised skills taught during the post-basic training in trauma and emergency nursing. This finding could be attributed to the specific bond created by performing research in the researcher's own teaching discipline and through discussion of shared knowledge and skills during interviews. However, the researcher remained vigilant during interviews when participants implied that she would know what they mean, and attempted to clarify and reflect the words of the interviewee to obtain their own opinion and descriptions (Asselin, 2003:100).

3.10 DATA ANALYSIS

Data analysis commenced after each interview. The understanding gained from each data analysis and from the reflective notes written after an interview, shaped and influenced subsequent research decisions and created a dynamic interplay between the steps of the research process (Moser & Korstjens, 2017:15).

Theoretical thematic analysis was used in this research to recognise, explore and report on repeated topics or themes embedded across the data, following the six steps prescribed by Braun and Clarke (2006:76,87). Latent thematic analysis aligns with the social constructivist paradigm of this study, in that analysis of data involves the construction of meaning through interpretation of inherent mind-sets and assumptions within a social context (Braun & Clarke, 2006: 84-85). Furthermore, preliminary literature surveyed prior to the data collection and analysis leans more towards theoretical thematic analysis (Braun & Clarke, 2006:86).

3.10.1 Phase one: Data engagement

The researcher spent time actively immersed and engaged with the data in order to become familiar with it and to comprehend all aspects of the interaction. Audio recordings were transcribed *verbatim* to provide an accurate and true reflection of the words that participants used to describe their experiences. The researcher ensured that transcriptions were a true reflection of the interview by creating and re-reading *verbatim* transcriptions in conjunction with the audio recordings and content was corrected if needed (Grove *et al.*, 2015:88). Understanding and interpretation of content were facilitated by re-reading transcripts and thereby identifying repetitions of meaning and central issues presented across the data. The researcher reflected on what was transpiring in the collected data, as well as identifying what was not evident in the data created by the participants, with the aim of improving understanding of patterns that might be concealed in the data (Moser & Korstjens, 2017:16).

3.10.2 Phase two: Codes

The research question of this study centred on the facilitators of, and barriers against, implementation of specialised skills. Against this background, theoretical thematic analysis was employed to provide detailed analysis of these aspects of the data. Braun and Clarke (2006:84) explain that coding aims to answer specific aspects of the research question and requires a more active analyst-directed method such as theoretical thematic analysis. The researcher composed an initial short draft of repetitive data presented across the data set. Coding was then applied to rudimentary segments of the raw data by assembling data relevant to a respective code. The data were manually coded to preserve the researcher's ability to analyse intricate data content intuitively and with insight, bearing in mind the significance that participants attached to the content they shared. Cropley (2019:123) acknowledges that manual coding keeps the researcher grounded in the real-life experiences of individuals, and this may improve the authenticity of data analysis. Furthermore, the researcher organised the data into remarkable basic elements while searching for contextual meaning that could answer the research question (Braun & Clarke,2006:88; Roller & Lavrakas, 2015:8). The process of dwelling in the words of participants, enabled the researcher to search actively for noteworthy features across the data so that their significance could be assessed.

The researcher followed the practical advice of Braun and Clarke (2006:89) by using highlighters with different colours to focus with equal thoroughness on the particular patterns and segments revealed in all the transcripts. This process was followed by collating the coloured and designated extracts from the transcripts to the respective codes. The researcher created an Excel spreadsheet correlating the colour of codes and extracts from each

participant to facilitate sharing with the supervisors and independent co-coder. After reviewing the entire data set again, 37 codes were captured from the ten interview transcripts.

3.10.3 Phase three: Themes

Themes capture prevalent expressions in data that relate to the research question and exemplify a significant recurrent meaning (Braun & Clarke, 2006:82). By using the list of respective codes, the researcher sorted these elementary segments of codes into broader themes. Consideration was given to different groupings of codes to inform predominant themes, followed by arranging all corresponding coded data excerpts to relevant themes. Some initial codes were considered to be themes, while other noteworthy themes started to become clear, and some codes did not seem to fit into any category.

3.10.4 Phase four: Theme reviewing

The researcher contemplated the distinctions between themes and duly identified wherever the grouping of coded data extracts formed coherent entities. The study of data extracts identified an elusive theme and a new theme was needed to capture fittingly that coded data as advised by Braun and Clarke (2006:91). The refinement of themes allows for the potential mapping of themes in the form of a mind map which can visually illustrate distinctions in the patterns of themes and subthemes. Thereafter, analysis of all the original collected data allowed the researcher to conclude that the themes and the theme map had captured the essence of the complete data set.

3.10.5 Phase five: Theme naming and essence

The significance of each theme was contemplated in order to clarify how it reflects the meaning of the data in the specific context of the research question (Braun & Clarke, 2006:92). During this phase, some subthemes of a particular complex theme were derived, which allowed for overall coherence between themes. Clear and captivating operational titles were then given to each theme.

3.10.6 Phase six: Report of findings

The production of the final written report on the findings completed the process of data analysis. That final report presents an analytical narrative corresponding to the research question in the following chapter 5. In that chapter, meticulous discussions are presented which are aimed at capturing the complex and intricate nuances of the data, to confirm the authenticity of the interpretation and analytics.

3.11 SUMMARY

This chapter provided a comprehensive description of the research process employed to address the aims and objectives of the study. The research setting and study population were described to provide context regarding particular sampling methods. Central to this chapter was the alignment of the explanatory-descriptive research design with a social constructivist paradigm to inform a trustworthy qualitative study and the data collection process. Finally, this chapter concluded with a description of the application of Braun and Clarke's (2006) deliberate and rigorous method of thematic analysis. The following chapter will present the comprehensive data analysis and subsequent findings.

CHAPTER 4
FINDINGS

4.1 INTRODUCTION

In this chapter, the results obtained by applying Braun and Clarke's (2006) thematic analysis of *verbatim* interview transcripts are presented. Representations of findings are directed to answer the research question: What are the perceptions of trauma and emergency nurse specialists regarding the factors that either hinder or facilitate the implementation of their specialised skills in their practice within the public health sector of the Western Cape Province?

The biographical data of participants are described in Section A. This is followed by Section B which addresses the themes and subthemes that transpired during the process of data analysis. The perceptions of participants are reflected in selected interview excerpts to substantiate the researcher's interpretation of how they make sense of their specialised practice.

4.2 SECTION A: BIOGRAPHICAL DATA

The sample of ten participants who were interviewed comprised three males and seven females, and included the one participant recruited for the pilot interview. All ten participants received their trauma and emergency specialist training in the Western Cape.

The participants' areas of employment in the trauma and emergency discipline at the research settings are indicated in Table 4.1.

Table 4.1: Participant employment area

UNITS	NUMBER OF PARTICIPANTS	HOSPITAL LEVEL
Trauma unit	2	Tertiary hospital
Trauma resuscitation unit	1	Tertiary hospital
Emergency medical unit	2	Tertiary hospital
Trauma surgical unit	1	Tertiary hospital
Combined trauma and emergency units	4	District hospital

4.3 SECTION B: THEMES EMBEDDED ACROSS THE DATA SET

The significance of repeated meanings embedded in the data that relate to the specific context of the research question was designated to four central themes. Furthermore, sub-themes of those four central themes were identified in order to reflect coherent and comprehensive groupings of the participants' shared perceptions.

Table 4.2: Themes and sub-themes

Themes	Sub-themes
Individualistic influences	Perceived self-efficacy of individuals Outcome expectations of individuals Motivational processes
Organisational context	Trauma and emergency units within the organisational structure Trauma and emergency nursing in practice settings Support in practice settings Social influences in the practice settings Safeguarding trauma and emergency nurse specialists' skills
Role adversity	Workload in trauma and emergency settings Staffing in trauma and emergency settings Multiple roles of trauma and emergency nurse specialists Inter-professional relations
Role ambiguity	Collaboration in the multidisciplinary trauma and emergency team Role expectations of trauma and emergency nurse specialists Scope of Practice and job description alignment

4.3.1 Theme 1: Individualistic influences

Most participants indicated that they feel confident and competent in applying the specialised trauma and emergency skills mastered during their training. Some participants actively pursued employment where they could practice in environments conducive to the application of their specialised skills. Furthermore, it transpired they all held the strong belief that optimal utilisation of their specialised skills in assessing and managing trauma and emergency patients could improve the delivery of timely, quality care in their units. Their specialised skills and knowledge helped them to act as patient's advocates to improve patient outcomes, as is demonstrated by narratives of specific scenarios and patient journeys. The researcher could identify individualistic influences that motivate trauma and emergency nurse specialists to implement their specialised skills in their practice. These personal factors are discussed under the sub-themes of perceived self-efficacy, outcome expectations of individuals, and the motivational processes involved.

4.3.1.1 Perceived self-efficacy of individuals

All but one participant stated that their competency in providing specialised skills equipped them sufficiently to provide trauma and emergency care at their level of training and expertise. Hence, participant's perceptions of their competency and self-efficacy in trauma and emergency specialised skills could be identified as a facilitator for implementing specialised skills. The following description echoes the sentiment of most participants who reported confidence in their competency in specialised skills within the unpredictable trauma and emergency setting.

> *"I, after my training, the amount of confidence I had when I was applying my skills! It was absolutely immense. Like I was super confident in doing and interpreting ECGs and all the other things that I've mentioned before. So, coming back from training, you gain a lot of confidence and you feel more competent as well. I mean, I am no longer scared of anything that walks through that door because you know that I've got the knowledge behind [the] management of the patient."* (Participant 7).

However, perceptions of limited self-efficacy emerged as the main individualistic influence that hinders a participant's implementation of specialised skills. Some participants reported that they lose confidence in their specialised skill competency when they do not utilise those skills often enough to maintain proficiency.

> "*So, it's kind of hard, especially if you're not exposed to things all the time. I mean I'm [a] human being, I'm going to forget things if I'm not going to be doing it on a daily basis."* (Participant 5).

In the Western Cape, employing facilities identify candidates who could potentially benefit by attending a post-basic specialisation course. An employer selection committee considers applications from employees who would like to embark on post-basic study and the committee selects candidates who may then apply to training institutions to enrol in a specific course. A requirement of two years' clinical experience in a specific discipline (such as in trauma and emergency units) is stipulated by both the employer and training institution. However, a participant felt that perceptions of competency in trauma and emergency specialised skills could depend on to the years of clinical experience in the trauma and emergency setting. His experience was that newly-qualified trauma and emergency nurse specialists struggle more to utilise their specialised skills when they have a lack clinical experience.

> *"The barriers or difficulty for them to apply these gained knowledge and skills that they obtained through-out the course - it's mainly to do with... some of them... went into the course, but they lack clinical years of experience in the clinical setting. They have difficulty within the course, and even after the course, they're still struggling."* (Participant 10).

4.3.1.2 Outcome expectations of individuals

Participants shared narratives of improved outcomes in patient care achieved by implementing their specialised skills. Nearly all participants addressed the time-sensitive nature of trauma and emergency care, where the implementation of their skills could potentially improve the flow of patients through their units and improve the access to appropriate care.

> *"There will be again patient flow, resus will be less congested. There will be patient flow. We won't lose or miss patients."* (Participant 4).

Two participants shared their outcome expectations based on the implementation of their specialised skills, using the example of a specific medical emergency where a diabetic patient develops the life-threatening complication of diabetic ketoacidosis (DKA). Successful treatment of this common complication is based on hospital-specific DKA protocols for diagnosis and treatment requiring immediate intervention. One participant explained their potential contribution as emergency nurse specialists in initiating treatment for DKA patients with the expectation of the following positive outcomes.

> *"Well, it will improve the quality of [treatment for] that patient … and then it might actually also improve the turnaround of patients within the emergency centre. Because now we have three doctors who are going to see plus-minus, … 90 patients… But if you are part of that multidisciplinary team and you know, when a DKA comes in, this is our DKA protocol, and you can commence it, you are actually decreasing that patient's stay in the hospital and actually decreasing the chances of that DKA being worse than it is. And in fact, actually also preventing further organ damage. Yes. And then it makes the turnaround for each a little bit faster."* (Participant 3).

4.3.1.3 Motivational processes

Participants portrayed personal motivation as being imperative for the implementation of their specialised skills. This means that individuals need to actively seek and create their own opportunities to make use of those specific skills mastered in specialised training. The following participant exemplifies such personal motivation to exploit and create opportunities to implement their specialised skills and to maintain their skill proficiency.

> *"The thing is, I don't want to lose my clinical skills, I don't want to lose my theoretical knowledge. That's why … if the opportunity is there,[I] keep on applying my clinical skills, or just use my theoretical knowledge to do stuff, because at the end of the day, it helps me to be a better nurse. I think it is more of a personal mindset, most of the time … It's individual motivation yes."* (Participant 6).

Two participants pursued new job opportunities in environments where they expected to gain more experience to support their specialised trauma and emergency training. One of them was unfortunate in not being allowed to implement specialised skills, resulting in the participant's immediate request to be transferred to a tertiary hospital. The other participant perceived that alternative employment was the only available option to improve exposure to trauma and emergency speciality skills.

> *"So, I basically moved over from a community health centre, purely for the fact that I needed more experience in my specialty."* (Participant 5).

Conversely, a loss of interest and motivation in practicing optimally was evident in trauma and emergency nurses who abandoned their efforts to fulfil their unique role and implement their specialised skills. Participants shared that it is easy to fall back to practicing the same way and doing the same routine nursing that they practiced before they completed post-basic specialisation. The following participant referred to practicing without considering specialised skills as "shrinking" to only receiving and carrying out orders without initiating any higher level of specialised clinical skills.

> *"I feel we are slowly but surely shrinking into just [saying] yes, no ... Ja [yes], I will do that now. We never actually take initiative for anything*." (Participant 3).

4.3.2 Theme 2: Organisational context

The researcher distinguished the role that the organisational context plays when participants described external factors that both hinder and facilitate the implementation of their specialised skills. Participants described this theme as it relates to trauma and emergency units in their hospital, and within their specific trauma and emergency nursing practice. The perceptions of participants with regard to support, social influences, and resources available in their environment provided more sub-themes that relate to the uptake of their skills in their practice environment. Lastly, their descriptions of aspects that play a role in safeguarding their trauma and emergency skills and ultimately the sustainability of their role, conclude the list of sub-themes in the organisational context of their practice.

4.3.2.1 Trauma and emergency units within the organisational structure

Most participants reported that the capacity of their trauma and emergency unit's bed space was often overwhelmed because of service pressure. Participants narrated that they often experience inundating service demands which act as hindrances to the application of their specialised skills. One participant stated that service demands that overwhelm the capacity of their trauma and emergency centre can be related to the socio-economic difficulties of the community that the facility serves.

> *"When they built this (mentions name) hospital, they didn't build it for that amount of patients we are catering for now. Because I don't think … they thought more shacks are going to come, more people moving into (mentions area), because the number of patients we receive is unbelievable. And the crime … the fights have been ongoing. This weekend [in] resus, I received 20 [trauma] resus patients. How are we [going to deal with this?] … where are they going? Where?" (Participant 2).*

Non-emergency patients may also occupy and block beds in a trauma and emergency unit. This occurs when ward or long-term intensive care unit (ICU) patients cannot be transferred out of a trauma and emergency unit and end up being managed there until discharge. Participants suggested that this backlog of patients in their units was due to staff shortages and lack of bed availability in the rest of their facility or lack of referral beds at the tertiary hospital. Participants indicated that nursing non-emergency ward patients and long-term ICU patients does not call for their specific trauma and emergency skillset. Therefore, they reported this as a hindrance to their skills implementation.

> *"Because of the shortage of staff, you end up nursing general patients that belong in the ward. Because of the shortage of staff and of space and of beds. A general patient like the medical patient, surgical patient, gynae patients, and also psychiatry patients that belongs in the ward, they become your responsibility. So, at the end of the day, you are not doing what you are trained to do as a trauma nurse. And then, the other big issue that I have now at (mentions hospital) is the fact that we are nursing ICU patients in our resus … there's a congestion of patients then at the end of the day in your resus. Because we only have two tertiary hospitals in the Western Cape, so if their ICU's is full, then we sit with ICU patients for … days."* (Participant 4).

Specific system failures that prevent trauma and emergency nurse specialists from applying their skills were also identified during interviews. Firstly, patients who visit the trauma and emergency units rather than primary healthcare clinics contribute to the large patient numbers.

This creates a misfit between the patient's healthcare needs and the trauma and emergency nurse's specific skillsets.

> *"I would think the one thing that has an impact on us applying our skills is the amount of patients that we have. The hospital serves a large community. A lot of patients … should actually not even be at the hospital, they should be at a clinic, but they come to the hospital, so that increases our numbers. When they come to us, it's things that are more on a PHC [primary health care] level, not on a trauma level. So, you end up not using your trauma skills, but your community [health nursing] skills, treating who [should] have been referred. The system yes, the system is definitely not working for us."* (Participant 7).

Secondly, system failures occur when triaging patients upon entry into the healthcare system. Incorrect triaging causes patients to end up in the wrong departments as far as specific management of conditions is concerned; this causes further delays to definitive emergency treatment and causes blocking of much-needed beds. One participant described a typical triage scenario where a patient with abdominal pain ended up in the medical, rather than in the surgical emergency unit, with an appendicitis that required emergency surgery.

> *"They triage the people and then, say [the] surgical patient ends up [in the medical unit] ... because they don't know how to ask the questions. The patient will complain of abdominal pain, but they don't ask where's the pain, what type of pain it is … patients with a query appendicitis will end up [in the medical unit]. Then it is difficult to get that patient to the correct department. Because now, the doctors need to refer again to that [surgeon] ... that will first come and see the patient there in [medical] wards, before they accept the patient in their wards and then there's no beds available [in the surgical ward]."* (Participant 8).

4.3.2.2 Trauma and emergency nursing in practice settings

Most participants shared the sentiment that their specialised skills are not optimally utilised in their trauma and emergency practice settings. During interviews, it transpired that participants often practice in the same capacity as a professional nurse without further specialisation.

> *"I will say that as a specialist or nurse specialist, that my skills are not utilised completely. We basically do everything that a general nurse does, or that a general nurse is capable of, and there isn't much of the specialisation part that we play."* (Participant 7).

Barriers against implementation of specialised skills were often related to the specific practice environment of the units where the participants are employed. A participant clarified that the employment of trauma and emergency nurse specialists in a particular setting posed a key barrier to skills utilisation.

> *"I just feel like the actual ward that we [are] in, shouldn't even [have or], it doesn't even need trauma trained people. If you really want a good trauma trained person, put them in place, so they will be utilised correctly. Ja [yes], like at least give them an environment that's gonna be conducive, or would be satisfying to them."* (Participant 5).

The following indignant views were offered by participants from another specific setting with regard to implementing the particular specialised skill of performing and interpreting an arterial blood gas (ABG) test that all trauma and emergency nurse specialists are competent in conducting.

> *"We are not allowed to do ABG's which is ridiculous. Because we know how to do it and we know on what patients to do the ABG on."* (Participant 4).

The negative consequences that arise when trauma and emergency nurses are not allowed to practice these ABG specialised skills were explained by the other participant from this unit; that participant indicated that this specific skill may improve timely and appropriate emergency care for critically ill patients.

> *"And time, time is so important especially in trauma. Time is so important. But now, the patient is going to sit and wait for doctor for a [to do a blood] gas, he is going to be busy with other things, [he will only] come back and [do the blood] gas [on] the patient in a half an hour. And a half an hour is a lot [a long time to wait] for an emergency patient."* (Participant 2).

Trauma and emergency nurse specialists are competent in a variety of life-saving treatments in a setting where the time for definitive treatment plays a critical role in successful outcomes for the patient. One participant used the example of the life-saving skill in defibrillation ("defib") and cardioversion ("cardiovert") of a patient with a cardiac emergency. All trauma and emergency nurse specialists were trained to perform emergency defibrillation and cardioversion and were found to be competent after completion of Advanced Life Support (ALS) certification. However, some participants reported that they still need to wait for a doctor and are not allowed to perform these skills on their own.

> *"You know when to defib the patient, you know when to cardiovert, you know what signs to look out for, but yet, you can't do it. You need to wait for the doctor and as I said before, sometimes it is a waste of time, but you can't just go ahead and do things out of your own."* (Participant 4).

When asked about standard protocols for treatment of trauma and emergency patients in the absence of a doctor, most participants indicated that these treatment plans do not include consideration of their specialised skills, or their ability to contribute to the timely management of patients with specific conditions. Trauma and emergency nurse specialists still need to wait for orders from doctors to initiate a standard treatment protocol, regardless of their higher level of specialised practice. Therefore, it could be concluded that the standard protocols in place at the participants' practice environment require assessment by a doctor prior to the initiation of a specific treatment protocol. The following participant express her view that there are enough trauma and emergency nurse specialists to meet the specific healthcare demand of certain diseases or injuries at her facility. However, these protocols often require initiation by doctors while the protocols in her facility do not allow trauma and emergency nurse specialists to initiate a protocol without a prescription by the doctor.

> *"Almost all our protocols are doctor driven. So, you have enough trauma specialists to act within their role. And you have … enough patients that require us to do that. We just need to match the protocols within the institution to allow us to [initiate a standard treatment protocol]."* (Participant 3).

However, other participants reported a different experience. They shared opportunities where appropriate communication skills and positive inter-professional relationships allowed them to participate actively in formulating or updating standard treatment plans.

> *"After we've had a good conversation and a few trials, we were able to actually better our protocols, or review and revise it according to the clinical standards now available. It just made us more aware that we needed to change the way we were doing things."* (Participant 1).

The researcher noted that the use of standard operating procedures (SOP's) differs in each setting, depending on the availability and support from medical doctors. Trauma resuscitation settings, where life-saving treatment should be initiated without any delay, are more conducive to the implementation of their specialised skills. One participant mentions how this empowered him to initiate life-saving treatment, based on his assessment of the patient's condition and without a prescription from a doctor.

> *"The SOPs, are guiding you what to do when you come across a certain condition. So, regardless [whether] there is a doctor or no doctor, you do have something that is guiding you what to do, until the doctor comes from theatre. So, all the basic things that you need to do, to save the patient, you do have [in] the guideline."* (Participant 9).

Another participant provided an example of such a life-saving protocol to initiate the massive blood transfusion protocol that can be implemented by trauma and emergency nurse specialists without waiting for a doctor's prescription.

> *"So, with our major blood transfusion protocol, I could activate that, because I knew when to activate it and what to do at what specific time."* (Participant 6).

4.3.2.3 Support in practice settings

Nearly all participants feel supported by their direct unit managers as far as implementing their specialised skills is concerned. Some participants go further and explain the support from unit managers in terms of incidences where they could approach them with questions regarding specific specialised skills.

> *"I won't complain about support, because if I do have a question about something, she will show me or explain [it] to me, she does do [a] random type of in-service training. So, like [with] the vent [mechanical ventilator] checks, and particular with an A-line, the day that I forgot [how to manage the A-line], I called her, and the two of us will do an A-line. So, support wise she is good, she understands also where I'm coming from."* (Participant 5).

Only one participant reported being discontented with the support received from the operational manager of her unit. This participant revealed her displeasure about the trauma and emergency nurse specialists who are challenged, but without the actual support needed if they are to meet (seemingly impossible) expectations. This caused situations where trauma and emergency nurse specialists are being blamed for not implementing their skills, rather than being supported and empowered by the operational manager.

> *"For me, it feels when I started there [again] after the course, [that] it's more [demands] like: 'you're a specialist, you are trauma and emergency trained, so you must do this, you must do that!', and actually ... there's no support [to meet that demands]."* (Participant 8).

However, the support from hospital management was reported to be lacking in terms of the optimal utilisation of employed trauma and emergency nurse specialists. Most of the

participants' discussions concerning support from hospital management reflected the view that priority was given at that level of management to patient statistics with the prevailing attitude that any nurse can care for the patients. Thus, specialised nurses need to fulfil any type of non-specialised duty where necessary.

> *"At the moment, I don't think they're concerned with our skills. They are just concerned with statistics: How many patients is in the unit and the unit that's so congested and the fact that there is no space, so I don't think they are too concerned about our skills. And the fact that they just don't care that you have scarce skills [laughing] as long as you look after the patients."* (Participant 4)*"*

4.3.2.4 Social influences in the practice settings

During interviews, the availability of role models for trauma and emergency nurse specialists was identified as a persuasive facilitator as far as utilising specialised skills was concerned. Relational learning opportunities directly influence the transfer of evidence-based knowledge to practice settings (Campbell & Profetto-McGrath, 2013:253). One participant shared an experience of a positive role model when forced to perform a life-saving thoracotomy procedure in his unit with only a very junior doctor available, and trauma and emergency nurse specialists to guide him.

> *"Because I worked with the sisters who were good in terms of [guidance through specialised skills] when the doctor is doing the thoracotomy, they were hands-on. We've had [a lot of] trauma trained and ICU sisters [and] they know what to do. So, we guide the medical officer right through, until the theatre had an [available] table. We were forced to do the thoracotomy in our unit, until we stabilised the patient and the patient was moved to theatre. The senior sisters groomed me to use each and every skill. [They told me:] you need to do what you need to do ... if you're competent to do those things, and you were trained, you must do it."* (Participant 9).

The persuasive influence of the unit manager as a role model was also mentioned by another participant who reported positive experiences with regard to the implementation of her specialised skills.

> *"And he's an example because he comes to the floor, and he does those things."* (Participant 7).

One participant emphasised the importance of, and critical need for, positive role models portraying the optimal functioning of a trauma and emergency nurse specialist, as she verbalised her desire to improve her specialised clinical practice.

> *"So at least that will motivate us to act more in our clinical setting. Because there are people who [are practicing their skills that makes you question] why other people are doing that? Why am I not? When you get that interactive with your colleagues, then you get to understand that, no, actually, I'm now actually acting at a basic general PN, not [as expected within] my speciality. You should be ashamed and you should want to do better. And then if you get to actually voice the fact that you are unable to apply your skills, then you can get advice from them. Maybe they didn't start by just applying their skills. They fought to be there. Or they possibly pushed their way forward. So, you can learn how they did it and then you can apply it in your situation."* (Participant 3).

Social influences in the practice setting may also reflect a scarcity of actively-involved role models for trauma and emergency nurse specialists. The researcher noted that this was mostly reported upon by participants who expressed frustration with not being able to implement their skills fully.

> *"I think they've lost most of their skills in the ward to be honest. I think you become complacent with where you are. I think because of the fact that they very seldomly get to use their skills, I didn't even know [that most of them were] trauma trained to be honest. Instead of doing something, they're very [quick to] just call a doctor to come and review a patient, instead of just doing something first, and then calling the doctor."* (Participant 5).

4.3.2.5 Safeguarding trauma and emergency nurse specialists' skills

The researcher noted that the inability to utilise specialised skills acted as a significant barrier against the safeguarding of specialised skills in practice environments. Skill competency in specialised trauma and emergency nursing should be maintained by means of regular attendance of accredited programmes appropriate to the skills provider's level of training. The researcher focused on accredited Triage training and Advanced Life Support (ALS) in the interviews, because trauma and emergency nurse specialists received certification as competent providers during their post-basic training. Both these specific, specialised trauma and emergency courses require re-certification every two years to maintain competency as a provider of those skills and to ensure the provider keeps up-to-date with new evidence-based research. Most participants were up-to-date with their Triage training, but no participant was able to maintain their ALS certification which expires two years after they completed their course. Hospitals do send the relevant staff members for Basic Life Support (BLS) training as a requirement for all categories of nurses from any department. However, trauma and emergency nurse specialists face challenges in maintaining ALS skills that are appropriate for their level of training, as explained by these participants.

> *"[Advanced life support courses are] more expensive also. So, I don't think they're going to send us, [due to] budget constraints. If they send me, they must pay for my course, plus they must find a replacement for me on that day that I will be away for the course. So yes, I think it has to do with finance, and replacing me."* (Participant 4).

One participant offered possible explanations of why trauma and emergency nurses are not able to attend refresher or accredited courses to maintain their certification.

> *"It is a challenge, because you [have] a scenario where a person is accepted for a course or refresher, but then you sit with the question... can I afford to send this officer out of the ward, or for day course? It all depends [on] what you have on the shift. And most of the time, you estimate that you can send, but unfortunately, [due to the staff complement on duty you] can't send."* (Participant 10).

Moreover, nurse specialists need opportunities to perform and practice their skills regularly in order to maintain their proficiency. All participants stated that they feel compelled to keep their skills up-to-date and placed a high value on the preservation of their skills as reflected by the next comment.

> *"But I think we need to have a yearly refresher course that will remind you of what you're capable of. This is how powerful you are. Because I think the longer you stay in an environment that doesn't allow you to use your skills, you become disinterested, and then you just go with the flow. And then one day you work with a doctor who's [flexible] enough [to allow specialised skill implementation], you get that thrill and that passion again. So, I think we need to have [refresher] workshops."* (Participant 3).

4.3.3 Theme 3: Role adversity

The theme of role adversity addresses difficulties faced by participants in their role as trauma and emergency nurse specialists. During interviews with participants, several topics were mentioned as being obstacles to the participants' attempts to utilise their specialised skills in their role as trauma and emergency nurse specialists. It was found that the barriers hampering the trauma and emergency nurse specialists from playing their optimal expert roles can be described under the following sub-themes: workload and staffing in trauma and emergency settings, multiple roles of trauma and emergency nurse specialists, and inter-professional relations.

4.3.3.1 Workload in trauma and emergency settings

The high workload in the practice setting was related to the frustration experienced by participants when service pressure caused them to have to abandon their specific role functions as trauma and emergency nurse specialists. One participant portrayed a typical night shift in a trauma and emergency unit when time pressure and service demands increase the workload to such an extent that they do not have time to utilise their specialised skills.

> *"So, with regards to overcrowding, it gets terrible at times because the last couple of nights we had about 95 patients in our unit. So, it was difficult for us to apply your specialised knowledge, you [just] had to do your basic nursing care. And that's always a difficult part when you are a full unit."* (Participant 6).

Another participant shared her frustration with nursing a 'red' triaged patient who required immediate intervention, but was managed in a chair. Such 'red' patients should be routinely admitted to an appropriate resuscitation bed where electronic equipment such as infusion pumps, ventilators and cardiac monitors are available. However, because of overcrowding and the inability to transfer a ventilated patient, all beds in the unit were occupied. This created an impractical situation where there was no access to an infusion pump or cardiac monitor to provide immediate life-saving treatment.

> *"If there is no space [to transfer a ventilated patient out of resus area] there is no space. The other red [patient], I must now stabilise him on a chair until I have space for him [in the resus area]. And then the doctor [says:] 'Sister but you only gave the fluid, you didn't start that Actrapid infusion.' Where must I start that Actrapid infusion? I cannot start it on a chair for my patient."* (Participant 2).

Furthermore, the nurse specialists should be able to play a unique and critical role in identifying any deterioration in a patient's status and implementing appropriate management to prevent serious complications. However, this role is often compromised by overwhelming workloads in trauma and emergency settings. This concern was highlighted by a participant while also reflecting on having to nurse patients in the hospital passage because of overcrowding.

> *"The ward can get so full that a patient will lay on a stretcher bed in the passage. So, your patient load becomes ridiculous. If your place is that full, it's hard to pick up who really needs more attention."* (Participant 5).

Ensuring patient safety was linked to the performance of optimal roles by trauma and emergency nurse specialists. However, patient volumes pose a serious threat to patient safety

and also threaten the trauma and emergency nurse specialists' ability to be satisfied with the performance of their skills.

> *"We strive to prioritise patient needs and apply time management skills. But still, volumes of patients make it difficult. If your expectation is patient safety, and the expectation is that you have to be proud of your work, it becomes a problem with [the] volumes of patients."* (Participant 10).

4.3.3.2 Staffing in trauma and emergency settings

Inappropriate staff allocation within specific trauma and emergency units presented another challenge to the ability of trauma and emergency nurse specialists to make optimal use of their skills. For instance, the skills mix of the staff complement on duty sometimes did not match the acuity demands of patient conditions. In this situation, the time pressures and workload were exacerbated. All trauma and emergency units are divided into specific areas or 'sides' of care, such as a resuscitation area equipped with all available technology in the form of cardiac monitors, ventilators, infusion pumps, fluid and blood warmers, and stock to manage high acuity admissions. Other designated areas are equipped to deal with less serious routine patient conditions, or specific management areas such as a respiratory area where a patient may receive nebulisations or oxygen in a chair. Trauma and emergency nurse specialists are allocated to a specific care area for their shift, depending on the skill mix and total staff complement on duty. Some participants reported the challenge of being the back-up for the whole unit to provide specialist support to colleagues contribute to their role adversities in their specific unit. This was reported when only one trauma and emergency nurse specialist was on duty at a specific time, especially if that nurse specialist was responsible for a non-resuscitation area, while at the same time also responsible for overseeing the resuscitation area where a professional nurse without specialist training was allocated. These common experiences were revealed during interviews and indicate the uneven distribution of specialist nurses over shifts. The following statement reflects the views of nurse specialists who feel they are being exploited in these situations.

> *"Sometimes you're also understaffed, on our shift we are three specialised nurses, which is an advantage. But then you get a shift where there's only one specialised nurse on duty. So, it actually doesn't correlate every day with regards to the staff patient ratio. It takes a lot from a person*." (Participant 6).

Moreover, the allocation of nurse specialists to specific areas within the unit, contributes to the role adversities experienced by participants. This could be identified when the nurse specialist was allocated to the low-acuity treatment area with her own heavy workload, while she must

be responsible for, and oversee, the non-specialised professional nurse allocated to the resuscitation area at the same time.

> *"Then you must work your side [as well as resus] side and at the end of the day, then your side is not covered, not everything is done on your side, because you were mostly in resus side. Because the registered nurses feel, why must specialty sisters only work in resus, [and] they must work every day with a bigger workload [and] more patients."* (Participant 8).

4.3.3.3 Multiple roles of trauma and emergency nurse specialists

Some participants reported that additional non-clinical responsibilities were expected from them in their role of trauma and emergency specialists. These all added to their workload and increased the strain they experience in their specialist role. Participants described their multiple roles in terms of administrative duties, teaching, overseeing other's work, safety of technological equipment and facilitating cost-awareness. These non-clinical duties were reported as acting as barriers to applying their specialised skills. This viewpoint indicates that these participants place a higher value on bedside clinical skills than on the non-clinical skills acquired during post-basic training. For example, competency in sharing their expertise and specialised skills during informal bedside teaching or in-service training sessions is developed during their training and is expected in practice as this participant indicated:

> *"[I] advise them to schedule some training sessions, where they share their gained knowledge and skills to the subordinates and rest of team members, and that will boost their confidence as well."* (Participant 10).

However, some participants reported that they cannot sustain consistent teaching and mentoring to share their skills and knowledge with their non-trained colleagues. This causes them to experience stress that add to their role adversities.

> *"[Trained specialists] teaching and mentoring is not enough, because sometimes you cannot sustain that all the time and then it becomes stressful because you have to teach and re-teach all the time and a lot [of] us don't have the patience to mentor."* (Participant 1).

The teaching and support responsibilities encountered by participants were not limited to nursing colleagues, but often extended to new junior medical staff. This situation exacerbated the strain they experience in their specialist role, according to one respondent.

> "*If you are the shift leader, you [may] come across a medical officer, who do not have experience. You need to educate that medical officer until he or she finds their feet. Because some they come [fresh] from university, so now, they are not sure."* (Participant 9).

Other non-clinical responsibilities allocated to a participant included providing accredited training programmes, such as the Triage training, as well as administrative duties related to their trauma and emergency speciality. Although these responsibilities reflect the enhanced and more senior role of trauma and emergency nurse specialists, one participant perceived these additional non-clinical duties as being the only difference between her and a professional nurse without specialised training. However, she placed more value on senior clinical bedside duties that align with her trauma and emergency speciality training, which differentiate her from a professional nurse without speciality training.

> *"I'm a Triage trainer, it's added that I must see to it that the disaster storeroom is up-to-date. So, it still speaks nothing to my clinical competencies. Because now currently as a PN SPEC, the only thing that sets me apart from a general PN is that I have more administrative duties, which is not what I should be having. I should be having senior clinical duties."* (Participant 3).

One participant provided another example of non-clinical duties required of trauma and emergency nurse specialists that indicate their multiple roles and contribute to their role strain.

> *"You need to make sure that your unit is functional and equipment that you're using is functioning and that you know how to use it, and that it is safe, all the time. In terms of cost [awareness], you need to make sure that you are aware of the [unit's] budget."* (Participant 9).

4.3.3.4 Inter-professional relations

The need to negotiate with colleagues and the medical team in order to implement specialised skills resonated amongst participants during interviews. This created the impression that the participants were often hindered by resistance from other professionals. Participants indicated that this typically took the form of prevailing combative attitudes or being ignored or looked down upon as the following excerpt reflected.

> *"In the beginning it was quite a bit of … almost a combative fight [between] you and the doctor. Because the doctor feels or that he is mostly [up] there and that your knowledge doesn't matter in any way. Then you get your junior doctors and they feel that they are [the] most important. They wouldn't even acknowledge the fact that you're*

> *there. Your senior sister, you get those that actually acknowledge and will help , and then you get those that won't even bother with you if you are in the room, doing the exact same thing, or helping the exact same case."* (Participant 6).

A lack of respect for the specialised skills and role of trauma and emergency nurses also became evident frequently, when participants portrayed inter-professional relations in their practice environment. This situation was reported to harm working relations and posed a barrier to the application of specialised skills by the participants.

> *"But I must say. It's your comm serve doctors [newly qualified doctors completing their required community service year post training] and your interns that think they are all THAT!. They treat you with such disrespect."* (Participant 4).

Another participant offered a contrasting view and presented the need for positive inter-professional relationships which are highly conducive to building trust and empowerment of the role of trauma and emergency nurse specialists.

> *"Because, a lot of senior doctors ask nurses to do stuff, because there is certain stuff that they don't know how to do and some will acknowledge the fact that they don't know so they will ask you, and that makes you feel better, doing your job. In our setup we have a trauma in resus consultant. He actually gives the specialised trauma nurses a time where you can lead that resus."* (Participant 6).

4.3.4 Theme 4: Role ambiguity

Most participants disclosed that the multidisciplinary team in their practice environment often lacked awareness of their specialised role and their skill sets. Participants also expressed the view that there is a lack of recognition and acknowledgement of their role as nurse specialists who are able to contribute and participate in the appropriate patient treatment. The theme of role ambiguity portrays study data indicating a lack of clearly delineated role responsibilities and lack of awareness of the specialist skills of trauma and emergency nurse specialists in their practice environments. Moreover, the study findings suggest that inter-professional incongruity about the role of nurse specialists and their specialised skills obstructs the implementation of the participants' skills. Such issues emerged during discussions about collaboration in the trauma and emergency multidisciplinary team, as well as about the role expectations of trauma and emergency nurse specialists, and their Scope of Practice and job description alignment.

4.3.4.1 Collaboration in the multidisciplinary trauma and emergency team

In this study, most participants expressed disappointment with their current role as trauma and emergency nurse specialists in the multi-disciplinary team in their practice environments. They reported that their higher-level skills are not integrated into multi-disciplinary practice. A participant expressed this situation, where no one values or listens to the trauma and emergency nurse specialist's opinion in the multidisciplinary team, as 'lacking a voice'.

> *"It's very important, I think, as a trauma nurse specialist, if we would be able to implement all of these skills and have a voice within the multidisciplinary team. Because the one thing that we are lacking is the voice within the team. No one listens to the nurse and no one values the nurse's opinion … no one take note, because within the multidisciplinary team, we're not noticed or recognised."* (Participant 7).

The doctors' preferences and their reluctance to consider alternatives in collaboration with the trauma and emergency nurse specialists were highlighted by some participants as creating barriers against the application of their specialised skills. In support of this viewpoint, one participant used as an example the internationally-acknowledged assessment sequence (ABCDE) of a trauma patient that trauma and emergency nurse specialists are competent to implement.

> *"Sometime you will have a certain doctor that prefers things to be done his way. [We were] taught in our primary survey [that] you start with the ABCDE. [But] then you get doctors, they prefer starting with BCD. So, they are sticking to their routine [and] they don't want you to disturb their routine."* (Participant 1).

In contrast, other participants touched on the essential aspects of trust and recognition of specialised skills within the multi-disciplinary team and reported on how this fosters optimal skill utilisation and also clarifies inter-professional role responsibilities. She shared her interaction within the team when referring to the insertion of an intercostal drain (ICD) to alleviate a life threatening hemo- and/or pneumothorax as follows.

> *"Some doctors feel like (mentions own name) has been [working here] for many years. If she says [insert an] ICD [Intercostal drain], I'm going to quickly do the ICD [insertion]. So, we would have that relationship with some of the doctors. And then some of them [medical doctors] they don't trust us, [and they think] this is a sister, I'm supposed to do this [as the doctor]. If there was a doctor that I worked with a while then he's confident in me or he trusts me enough ... to do what I say."* (Participant 2).

A participant shared her vision of trauma and emergency nurses fulfilling their potential as valuable contributors to discussions during the rounds of the multi-disciplinary team, with their input aimed at preventing complications and improving timely service delivery.

> *"And then others can draw knowledge from you, [so] that [the] future can seem different of what a nurse should be doing in a multidisciplinary team. Not just writing and taking orders, but being part of the discussion … it will improve the quality of that patient and then it might actually also improve the turnaround of patients within the emergency centre. " (*Participant 3).

Positive interactions with the multi-disciplinary team were reported by one participant who expressed his appreciation for being consulted for his clinical expertise as a nurse specialist during resuscitation events. This type of multi-disciplinary teamwork facilitates consensus of the specific role of nurse specialists and how their skills can be integrated to improve the outcomes of team efforts.

> *"And that's the thing that I appreciate the most. When we have a trauma resus and our consultant is there. It's not just the doctors or the consultants whose resus opinions count, he asks you as the nurse as well. I appreciate that a lot because it means that he considered you in that regard."* (Participant 6).

The role of patient advocate has given the participants an important incentive to implement their specialised skills and in doing so, highlight their rightful place within the multi-disciplinary team. Because of the unprecedented COVID 19 pandemic there was a need to implement specific infection control policies and patient transport regulations, to prevent overwhelming of healthcare capacity. Regardless of the critical importance of such extreme measures, healthcare providers were challenged with novel ethical dilemmas when conventional ethical principles could no longer guide decision-making. One participant passionately shared the following experience.

> *"My fight with the consultants was, if I stabilise him, [from] a Sats [saturation] of 40 [%] when he came [in]. Then I stabilise him so that by the end of my shift he had a Sat [saturation] of 80 [%]. Does that patient not get a chance then? Why can he not get a chance to go to [the tertiary hospital] then? I nurse him the whole day, and then at seven [pm] his Sats [saturation] is 85 [%] from the 50 [%] that it was. Then I must withdraw [stop treatment]. I will not do that [give up on the patient]. So, I said okay, then I am going to keep him in resus [on the ventilator] until you [medical team] decide a proper plan for him. I told them straight. I am not going to do that [give up on the patient]. I don't think it is fair towards my patient to do that [withdraw treatment]. And*

somehow, [we] managed to do that [keep patient ventilated and transferred to tertiary hospital]. They listened at least." (Participant 2).

4.3.4.2 Role expectations of trauma and emergency nurse specialists

The data obtained during the interviews gave many descriptions of the uncertainty that trauma and emergency nurse specialists felt regarding their roles and skills. Participants mentioned that barriers to the optimal uptake of these specialised skills were often linked to the fact that medical practitioners are not aware of the specific skill sets of each category in the nursing profession. Furthermore, junior doctors were often described as being oblivious of the training and skill competencies of each nursing category.

"I don't think the doctors are aware [of nursing categories], and obviously they can't differentiate between the nurse specialist and the general nurse [professional nurse without specialised training]." (Participant 7).

This type of extract portrayed role ambiguity in the form of a lack of consensus and understanding of the role and skills of trauma and emergency nurse specialists. This was also evident from the following reflection of a participant.

"*Doctors and maybe even us [nurse specialists], we are not fully aware of what we can do."* (Participant 7).

The lack of any clear demarcation and insufficient awareness of the specific role and function of the trauma and emergency nurse specialists hinders the application of their skills. Likewise, the commonality between what is expected of doctors and the trauma and emergency nurse specialists' skills could be identified as a limitation to optimal skill utilisation. This could be discerned in the following comments of one participant who aptly identified a lack of awareness of the role of each category of nursing, and their capabilities, and how these roles overlapped with some traditional roles of doctors.

"It goes back to doctors being unaware of our capabilities, and therefore they don't understand our role, especially as trauma nurses [trauma nurse specialists], because I think they've struggled to switch, between knowing what the general [professional nurse without specialised training] does and what the nurse specialist does. There is a bit of role ... overlapping [between doctor and nurse specialist]. I don't think there's any competition, it's just ... them [doctors] being unaware of our roles as nurse specialists." (Participant 7).

4.3.4.3 Scope of Practice and job description alignment

Participants commented on an expectation that they should act beyond their Scope of Practice. This led the researcher to elaborate on the impacts that perceptions regarding the Scope of Practice regulations have on the ability of trauma and emergency nurse specialists to implement their skills in practice. One participant referred to limitations on timely intervention for the acute medical emergency of myocardial infarction (MI) because of perceived barriers in the Scope of Practice and uncertainty regarding legal accountability. The following comment was made.

> *"Because if can take an MI patient for example, you know what signs to look for. You do the ECG, the interpretation of the ECG. Now, you must first wait for the doctor before you can give stat [immediate] treatment. Because it's not in your Scope of Practice. You know you're supposed to give Aspirin [and] Isordil. You know what treatment you're supposed to give, but it's not within your Scope of Practice [to give that treatment without a prescription]. You must first wait for the doctor and sometimes it takes long, because they're busy with another emergency and it's only a few doctors, which causes a delay in patient treatment at the end of the day."* (Participant 4).

During interviews, participants shared their perceptions of accountability enacted in their Scope of Practice in the context of their responsibilities according to the employer's job description. They often mentioned that the employer's expectations, as described in their official job description, do not always align with their actual specialised skill set and legitimate competencies acquired during their specialist training.

> *"My job description is still the same as … how many years ago. Essentially it is still the same, as any registered RN [professional nurse without specialised training] job description. There's nothing particular about trauma trained in that job description in any case. Yes, I'm responsible for stores. Yes, I'm responsible to lead my team. Yes, it's my duty to see that there is enough drugs. Yes, that is there, but other than that, practicing as a trauma trained sister in an emergency, like ICD [inserting a life-saving intercostal drain], inserting IV [intravenous peripheral canula], it is not in there. That is what they need to look at. They should look at the job description again and then add [to it]. But add in such a way that it is for a skilled trauma trained person, and also considering her Scope of Practice."* (Participant 2).

One participant was asked whether a trauma and emergency nurse specialist should have a job description differing from that of a general registered nurse. In response, that participant

interlinked the concepts of responsibility stated in their job description and accountability enacted in their Scope of Practice as follows.

> *"Because you are required to work at a higher level of competency [and] because you have gone through the training, [improving your] clinical skills, there is an expectation that you should produce a better quality of work or be better clinically at the patient's bedside. So, because the expectation is there, I think that the role description should also change, expectations to be adjusted according to the expectations. That would also make the trauma specialist aware [of the expectation] to practice at a higher level now, because of being taught differently, and also accountable and responsible to function at a higher level."* (Participant 1).

The lack of clear descriptions of the role and function in practice of the trauma and emergency nurse specialists, remains unresolved in the study setting. It is imperative to deal with this issue, but it remains neglected in practice as this participant indicated.

> *"Our manager is also trauma trained [has insight into nurse specialists' skills and role], so I know that they were sitting [to discuss with all stakeholders during a workshop] with the criteria for [staffing in the] resus [area]. Then at the same time, we were also sitting [to clarify] what am I as a trauma nurse [specialist with specialised skills] supposed [allowed] to do in resus. I know they were sitting with that, but what they compiled didn't come back to us yet. It [any policies or nurse specialist's job description] didn't come back to us."* (Participant 2).

One participant concluded that the curriculum content of the trauma and emergency nurse specialist's training in specialised skills presents another critical factor that is not aligned with SANC Scope of Practice and hospital policies. It must be noted that at the time of this research study, trauma and emergency nurse specialists were trained according to what would soon become the legacy R212 post-basic curriculum. They practiced without specific SANC endorsed trauma and emergency nurse speciality required competencies. Beginning from 2021, emergency nurse specialists will be trained to a higher level according to the SANC endorsed competency requirements published in 2019 (SANC, 2019a).

> *"As far I am aware, I haven't really gone to look at the latest SANC [publications]. But, the Scope of Practice for trauma nurse specialists isn't there, so I think... we still need to work on those policies, although, I know what the curriculum entails and what I am able to do. But, from policies and what is in place within the nursing council and within the hospital policy as well, I think there is a discrepancy in what is being taught and what is actually happening in the field."* (Participant 7).

4.4 SUMMARY

In chapter 4 the findings from this study were presented, using the perceptions of ten trauma and emergency nurse specialists. Their *verbatim* comments, presented above, convey the significance that they conferred to the facilitators and barriers in their specialised practice. The findings were organised under four themes: individualistic influences, organisational influences, role adversity and role ambiguity. Participants reported underutilisation, and a lack of awareness, of their specialised skills and of the nurse specialist's role in practice environments. Barriers against the implementation of those skills were identified as organisational factors, perceived professional Scope of Practice limitations, workload and staffing in trauma and emergency units and contested opportunities to practice their specialised skills.

Conversely, the participants identified various facilitators which empowered them to implement their skills. These included individual motivation and the availability of positive role models. Another significant facilitator which empowered participants to apply their skills was their belief in their advocacy role in improving patient outcomes. Throughout the interview process, participants expressed competence and confidence in their specialised skills. However, most participants disclosed that they are not able to practice to the full extent of their training and receive little support when striving to do so. This is because of role responsibility confusion and a lack of awareness regarding their specialised skills. These findings will be expounded upon further in Chapter 5.

CHAPTER 5
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The previous chapters contextualised the study's background and foundation. Thus, chapter 2 described a literature overview of South African trauma and emergency practice; that chapter also reviewed internationally reported factors that facilitate or hinder the application of skills by specialised nurses. Subsequent chapters on describing research methodology and presenting the findings of this study endorsed the construction of four themes: individualistic influences, organisational context, role adversity and role ambiguity themes. These themes captured the perceptions of trauma and emergency nurse specialists regarding factors that hinder or facilitate implementation of their specialised skills. This chapter will interpret and align study findings with internationally available literature, supported by Bandura's social cognitive theory (SCT), to portray a theoretical framework of the findings of the study.

Participants shared their perceptions of applying their specialised skills in the trauma and emergency practice environment. Their input resonated significantly with Bandura's SCT (Bandura, 1977; 1986; Wood & Bandura, 1989) and its subsequent application to career environments by other theorists such as Schunk and DiBenedetto (2020). The constructed themes and subthemes used to capture study findings could be aligned with the SCT as illustrated with the following research framework discussion, table and thematic map.

5.2 THEORETICAL FRAMEWORK: SOCIAL COGNITIVE THEORY

The use of Bandura's SCT to provide the theoretical framework for this study supports the notion of theory application in qualitative research as described by Collins and Stockton (2018:1). Therefore, the dynamic interplay between individuals, their external environment and application of specialised skills, as reported by the participants, underwrote the use of Bandura's SCT (Bandura, 1977) as the theoretical framework for this study. The research data revealed that these three factors are caused by, as well the effect of, each other. Individualistic influences cause a change in behaviour as far as implementation of skills is concerned, in terms of task choice, persistence and effort to utilise specialised skills. However, a person's behaviour in implementing those specialised skills also has a reciprocal, or feedback effect, on that person's motivation, perceived self-efficacy and outcome expectations, as individualistic influences.

The external environment where these nurse specialists practice is represented by the social and organisational context and is the third influence in Bandura's triadic reciprocal model. The analysis of the research findings identified significant barriers and facilitators regarding usage of specialised skills in the external environment. By means of complex bi-directional interactions, the external environment facilitates or hinders the usage of specialised skills. At the same time the usage or under-usage of those skills also creates the external environment of the trauma and emergency nurse's practice. Therefore, the themes of organisational context, role adversities and role ambiguity represent the external environment and social influences where trauma and emergency nurse specialists practice. The reciprocal effects between this external environment and the individualistic influences complete the triadic model, since individuals not only create their environment but are also the product of their environment (Wood & Bandura, 1989:362).

Collins and Stockton (2018:6) advocate for the use of a theory as an interpretive framework to support data analysis. Therefore, a description of the alignment of this study's findings with the SCT (Bandura, 1977) was included in this chapter to provide a framework to support the interpretation and discussion of those findings. The following table 5.1 illustrates the concepts of the SCT (Bandura, 1977) determinants of task implementation behaviour aligned with the discussion of themes and subthemes to answer the study question.

Table 5.1: Alignment of Bandura's SCT determinants of skill implementation behaviour with themes and subthemes of study findings

SCT concepts	Themes	Sub-themes
Personal factors	**THEME 1:** Individualistic influences	Perceived self-efficacy of individuals Outcome expectations of individuals Motivational processes
External environment	**THEME 2:** Organisational context	Trauma and emergency units within the organisational structure Trauma and emergency nursing in practice settings Support in practice settings Social influences in the practice settings Safeguarding trauma and emergency nurse specialists' skills
	THEME 3: Role adversity	Workload in trauma and emergency settings Staffing in trauma and emergency settings Multiple roles of trauma and emergency nurse specialists Inter-professional relations
	THEME 4: Role ambiguity	Collaboration in the multidisciplinary trauma and emergency team Role expectations of trauma and emergency nurse specialists Scope of Practice and job description alignment

A concept map to illustrate the influences that the SCT concepts have on each other helps to clarify the embedded function of Bandura's theory in the discussion of the research findings (Collins & Stockton, 2018:5). The adapted Bandura's model (Wood & Bandura, 1989) of reciprocal interactions to align with the themes and subthemes of this study can be illustrated with the following concept map.

Figure 5.1: Themes and subthemes of study findings as related to Bandura's model of reciprocal interactions (Wood & Bandura, 1989:362)
(Figure by researcher)

5.3 DISCUSSION

This study is of an exploratory-descriptive nature and aims to explore and describe the perceptions of trauma and emergency nurse specialists regarding the factors that either hinder or facilitate the implementation of their specialised skills in the Western Cape public health sector. Moreover, this study has aimed to improve understanding of implementation issues related to the utilisation of the skills of trauma and emergency nurse specialists in their practice. There is a lack of South African research into application of specialised skills in the practice of trauma and emergency nurse specialists. This shortage raised the researcher's level of concern about awareness and optimal utilisation of their rigorous training and speciality competencies. Interpretation of study findings will be discussed under each research objective and aligned with available research and Bandura's SCT.

5.3.1 Objective 1: To explore and describe the perceived facilitators regarding the implementation of specialised skills by trauma and emergency nurse specialists in their practice within the public health sector of the Western Cape Province

The following discussion addresses the four major themes constructed through an analysis of study findings designed to meet this objective.

5.3.1.1 Individualistic influences

The narratives of participants indicated confidence in their higher-level trauma and emergency skills and this confidence signifies their belief in the credibility of their specialised skills. Their confidence in their ability to facilitate effective and noticeable implementation of those specialised skills corresponds with international findings of higher levels of nursing practice (Barnhill, McKillop & Aspinall, 2012:34). It also aligns with a systematic review with meta-synthesis on effective practice of nurse specialists (Jones, 2005:194). All of these study findings show that the participants' confidence in their higher-level skills is pivotal for the recognition of relevance regarding advanced nursing practice, not only by the profession itself but also by the multi-disciplinary healthcare team. Although it would seem that international research had exhausted this topic more than five years ago, these studies are included here for seminal value in the South African context, where a lack of studies could not provide current scientific evidence.

Findings of this study suggest that the application of specialised skills by trauma and emergency nurses, in assessing and managing trauma and emergency patients, could improve the delivery of timely, appropriate and safe patient care. This conclusion is remarkable in the trauma and emergency speciality, given that Wolf and Delao (2013:424) relate quality

and safe trauma and emergency care to the aptitude of emergency nurses in promptly identifying and managing time-dependent needs of this specific patient population. Participants in this study recognised that their specialised skills and knowledge enabled them to improve trauma and emergency nursing care delivery. This perception was consistent with results of international research showing how emergency nurse practitioners view their role (Lloyd-Rees, 2016:50). However, the findings described in this study, regarding the participants' perceived proficiency and confidence in their specialised skills when meeting demands in practice, are in contrast to the findings of an Australian quantitative research project. According to those findings, postgraduate study had either insignificant or zero impact on patient care activities or on behaviour in performing advanced skills. (Pelletier *et al.*, 2003:441). These authors offer a possible seminal explanation for the perceived insubstantial effect of postgraduate education on the participants' performance in specialised skills; thus, perhaps the academic course content is not aligning educational outcomes with practice demands. Data obtained from this study indicate that the trauma and emergency nurse specialists viewed their post-basic education as empowering them sufficiently and even equipping them with more than expected specialised skills to meet patient care challenges in their practice environment. Therefore, educational empowerment in this study could be identified as an important facilitator for applying specialised skills although it would appear to be a novel concept in the South African trauma and emergency nurse specialists' practice.

The findings of this study also reflect the nurse specialists' commitment to improving trauma and emergency patients' outcomes, by optimally applying their improved knowledge and skills in their specialised nursing practice. This agrees with the findings of Barnhill *et al.* (2012:35) in New Zealand, regarding the impact that acute care post-graduate education had on registered nurses. The participants reported positive attitudes regarding their perceived competency in their specialised skills and held optimistic beliefs about the effect on patient outcomes. These factors clearly emerged as key facilitators to implementation of specialised skills. This new understanding of the motivation of trauma and emergency nurse specialists, through job satisfaction and their ability to deliver a higher-quality nursing care service, is supported by the findings of Lloyd-Rees (2016:52).

A systematic review of the impact of post-registration education on nursing practice (Gijbels, O'Connell, Dalton-O'Connor & O'Donovan, 2010:66-67) supports the viewpoint of satisfaction with the content of educational programs designed to equip learners with the knowledge and practice skills needed to improve their nursing practice. These authors confirm the benefit of post-registration training to the individual by implementing some knowledge and acquired skills. However, this review indicates that the advantage of post-registration training accrues

primarily to the individual and their own professional development, rather than to the actual development of specialised nursing practice requirements or changes in the organisational context (Gijbels *et al.*, 2010:68). Similar statements by participants support this view when they indicated that personal motivations play the most important role as a facilitator in the implementation of their specialised skills, rather than expected specialised practice requirements. The findings of this study highlight that trauma and emergency nurse specialists need to display individual responsibility and to show interest in implementing their skills and creating their own opportunities. This is best done through active involvement in patient care since no formal specialised practice guidelines exist to stipulate their practice requirements.

The level of confidence that trauma and emergency nurses have in their clinical skills, as far as promoting implementation of those skills in their practice is concerned, reflects Bandura's SCT (1977) position that perceived self-efficacy facilitates task performance behaviour. Moreover, those participants seeking and creating their own opportunities resonate with their own competency beliefs in guiding task choice and looking for opportunities to implement their speciality skill sets (Wood & Bandura, 1989:365–366). The study findings reflected the importance of individual motivation and that person's confidence that skills utilisation will have a positive effect in improving patient outcomes. This aligns with SCT determinants of behaviour as being factors which determine whether individuals will perform learned actions (Schunk, 2012:101) and sustain goal-directed actions (Schunk & DiBenedetto, 2020:1).

This study also showed that compassionate patient advocacy, embedded in higher-level knowledge and skills, provided another enabling factor for skills implementation in trauma and emergency specialised practice. Proficiency in the specialists' advocacy role is expected from post-basic trained trauma and emergency nurse specialists in Africa (Wolf *et al.*, 2012:179). It is also a SANC competency requirement for emergency nurse specialists.(SANC, 2019a:9). Study findings illustrate passionate advocacy and acting in the best interest of patients when trauma and emergency nurse specialists believed their specialised knowledge and skill contribution could improve patient outcomes. This finding is comparable with the conclusion of a study of APRN by Hanks, Eloi and Stafford (2019:217), conducted to understand the patient advocate function of APRN. Their study found that the increased medical knowledge gained during further education, enhances assertiveness and the ability of specialised nurses to act as patient advocates. Moreover, the nurse specialists' passion for their advocacy role reported in this study's findings, mirror the same enthusiasm to engage in advanced nursing practice as described in the seminal work of Ball (1999:71).

In this study, trauma and emergency nurse specialists were found to assign a high value to patient advocacy and to speaking up for vulnerable and acutely sick patients who require high

levels of biomedical support and specialised nursing skills. This finding is analogous with achieving valuable goals and generating sufficient proof of the effectiveness needed for continued and consistent application of skills, according to Bandura's SCT (1977). Furthermore, being able to have a positive influence on patient care and outcomes, through successful patient advocacy, is a valuable goal. In order to achieve it, positive task accomplishments are needed as these are the most valuable sources of feedback on self-efficacy (Schunk & DiBenedetto, 2020:3). The researcher concluded that each participant's motivation to speak up and act as a patient advocate represents a facilitator of skills application. At the same time, they were able to accomplish tasks positively while improving patient outcomes through patient advocacy. This reinforced their feelings of self-efficacy which had a reciprocal influence on their perseverance and task choice behaviour when implementing their specialised skills.

5.3.1.2 Organisational context

The participants' perceptions of factors in their practice environment mostly centred upon discussions of barriers against the application of specialised skills. However, a few participants shared positive encounters where appropriate communication skills and positive inter-professional relationships allowed them to make use of current research and new evidence-based practice protocols. The same perceived ability to facilitate improvements, supported by best practices and research, was also reported by Lamb, Martin-Misener, Bryant-Lukosius and Latimer (2018:406) in their study of leadership capabilities of the Canadian APN. Furthermore, several international studies produced scientific evidence on the need for organisational empowerment of advanced practice nurses within their practice environments (Dubree *et al.*, 2015; Jones & Kapu, 2013; Kapu, Thomson-Smith & Jones, 2012).

One participant's persistence, communication and multi-disciplinary involvement allowed her to participate actively in improving her trauma team's emergency protocols. This took place after reviewing outdated standard emergency protocols in that unit. This participant's experience was in accordance with the findings of the Dubree *et al.* (2015:44-45) study of the organisational empowerment of APRN in terms of performing to their full potential in an optimal practice environment. These authors propose that cultivating an organisational structure of collaborative and trusting relationships, with support for the unique contributions to the team by their APRN, will empower highly trained nurses to participate in the provision of quality healthcare and excel in their clinical practice. Moreover, the existence of inter-professional team partnerships between nurse and physician leaders, with clearly demarcated roles and responsibilities (Dubree *et al.*, 2015:45), will promote the physician's trust in the APRN's abilities (Jones & Kapu, 2013:n.p.) This contributes to an empowering environment that fosters

and supports productive evidence-based practice and high quality patient care (Kapu *et al.*, 2012:51).

Standard operating procedures (SOP's) offered the participants another opportunity to implement their specialised skills in specific trauma settings. Participants expressed very divergent views on the role of the trauma and emergency nurse specialists in initiating SOPs. However, it transpired that trauma resuscitation settings were the most conducive to autonomous interventions to initiate time-critical and life-saving treatment. Support from the medical team in identifying practice needs and compiling SOPs to guide trauma and emergency nurse specialists in the absence of doctors empowered them to start the intravenous fluids and the massive blood transfusion protocol. They did this based on their assessment of the trauma patient's hemodynamic status. Clinical resuscitation skills in fluid management and massive blood transfusions are included in the SANC's description of the essential clinical skills of the emergency nurse specialist (SANC, 2019a:11,12). However, that new competency document endorsed by the SANC does not state clearly whether emergency nurse specialists may initiate massive blood transfusions based on their assessment of the trauma patient. One could therefore argue that setting specific SOPs, compiled and supported by the trauma multi-disciplinary team, will ensure that trauma and emergency nurse specialists are empowered to initiate immediate life-saving fluid and blood product protocols in specific situations.

The important role of nurses in performing massive blood transfusions for acute trauma cases is emphasised by Barrett, Webb and Louw (2010:15). Performing this role ensures prompt and organised administration of appropriate blood components. These authors advocate for clear delineations of task expectations and proper communication with all members of the resuscitation team whenever massive blood transfusions protocols are initiated, in order to ensure positive patient outcomes. Here it is relevant to note the findings of a project conducted during four months in 2017 and 2018, and designed to modify massive transfusion protocols (MTP) at a Level II trauma centre in San Diego (Espinosa, Gallagher, Kosak, Maury, Pedicini *et al.*, n.d.:1).Their findings support the optimal utilisation of trained trauma nurses to initiate MTP. The results from this project also highlight that this modification served to clarify the roles and responsibilities of front-line trauma care providers. The results of this MTP modification project established that a designated group of trauma trained nurses activating and coordinating their MTP, improved timely administration of appropriate blood products and decreased wastage of unused blood products. These findings offer an attractive approach to MTP, bearing in mind the critical shortages of blood products during high-demand periods in South Africa, as well as the importance of timely and correct blood transfusion in trauma

settings. Moreover, it provides scientific evidence to support the practice described by participants in which trauma resuscitation settings do allow them to initiate massive blood transfusions as guided by SOPs.

Schunk and Usher (2012:15) identify personal motivation, performance incentives, perceived needs, environmental conditions and socially created expectations as determinants of task performance behaviour. The social expectation created in the practice environment to utilise specialised skills in the initiating of massive blood transfusions to manage the hemodynamically unstable trauma patient, mirror these determinants of task performance. In an emergency, the motivation to save a patient's life together with time-critical performance incentives creates a perceived need to autonomously initiate the massive blood product and fluid resuscitation protocol. Additionally, emergency blood is available for such critical trauma management in the trauma resuscitation unit. There is further social pressure because of the expectation that trauma and emergency nurse specialists should initiate life-saving measures in the absence of doctors. Hence, social and environmental factors influenced ways in which individuals applied their skills in initiating massive blood transfusion protocol. The application of those skills boosted the individual's perception of self-efficacy and created positive and optimistic emotional responses, mirroring the reciprocal influences of the external environment, task behaviour and the individual (Wood & Bandura, 1989:362). Participants shared emotional responses through happiness in their accomplishments when they were able to practice optimally at their level of training. They referred to that response as a 'rush', feeling 'so special' or simply 'I can't even put [it] into words'.

Support from the participant's direct manager in the unit support was found to facilitate the implementation of specialised skills and underscores the unique role of trauma and emergency nurse specialists in the study settings. Moreover, the support from unit managers extends to being a valuable resource person and mentor when managers could answer questions regarding specific specialised skills and provide on-the-spot teaching. This study found that empowering and supportive managers act as facilitators for applying specialised skills in the practice environment. This finding is supported by other researchers who found that supportive nursing leadership facilitates the optimal utilisation of advanced nursing practice in an emergency care setting in the US (Wolf *et al.*, 2017:431) and Wales (Jones, Powell, Watkins, Kelly, 2015:7). Moreover, this finding also agrees with other research findings that identified supporting environments as a factor that positively impacted clinical leadership behaviour (Connolly, Jacobs & Scott, 2018:886).

The results of this study showed that persuasive senior trauma and emergency nurse specialists and manager role models have a meaningful effect in advocating for, and

portraying, optimal practice of specialised skills. That effect was in the form of enabling social influences in the participants' practice environment. This finding is similar to those of Lamb *et al.* (2018:403,406) who showed that APN's enhance the higher-level professional practice of others by leading by example as role models. An analysis of organisational functioning through the lens of SCT, conducted by Wood and Bandura (1989), focuses on three issues: modelling influences to transmit skills, building confidence in the ability to perform tasks, and adapting to manage different and changing situations in the workplace. Mastery modelling creates opportunities to use learned skills successfully while facilitating beliefs of competency in others and portraying the value of competent performance of skills (Wood & Bandura, 1989:363). This theoretical perspective of master modelling was validated by the participants' narratives of competent performance of specialised skills by senior trauma and emergency nurse specialists, resulting in successful patient outcomes.

Moreover, participants depicted competent and confident managers and the modelled behaviour of specialised nurse team leaders, as promoting visibility and the value of specialised practice in having a positive impact on patient care outcomes. Likewise, Lamb *et al.* (2018:403,407) refer to this characteristic of advanced practice nurse leadership as modelled professionalism. As such, it portrays what is expected in the professional practice of specialised nurses. It also advocates for nursing and collaboration with other healthcare providers in the context of patient centred nursing care. The importance of, and critical need for, positive role models portraying the optimal functioning of a trauma and emergency nurse specialist were shared by a participant as she spoke of her desire to apply her specialised skills. Such perceptions of leadership in the practice of trauma and emergency nurse specialists resonate significantly with the definition of an advanced practice nurse leader as a person who models utilisation of their specialised skills to create a vision for higher-level nursing practice, while facilitating the engagement of others in that vision (Lamb *et al.*, 2018:401).

5.3.1.3 Role adversity

In this study, the theme of role adversity reflects barriers against implementation of specialised skills; as such it will be addressed during discussion of objective two under section 5.3.2.3 below.

5.3.1.4 Role ambiguity

Interpretation of the data obtained during this study yielded one divergent view regarding inter-professional relations. That particular view reflected positive interactions conducive to building trust and recognition of the role of trauma and emergency nurse specialists. Wolf *et al.* (2017:432) establish that advanced level practice includes not only clinical skills but also

encompasses social aspects such as trust and multi-disciplinary collaboration. Therefore, this finding addresses another social influence present in practice environments that facilitate implementation of specialised skills. Because of their abilities in using their specialised skills, the trauma and emergency nurse specialists were respected for their contribution in providing high-quality nursing care. This in turn supported the participants' perception of their self-worth and the credibility of their specialised role. In a similar way, other research findings discuss the clinical credibility of the APN as clinical experts; such credibility establishes respect for advanced knowledge and expertise skills (Lamb *et al.*, 2018:408). This sets the stage for nurse-physician collaboration in a supportive organisational culture to promote advanced nursing practice (Wolf *et al.*, 2017:431). Perceptions and beliefs regarding one's credibility and feelings of self-worth, as generated by social influences in the external practice environment, align with social sources of self-efficacy information as *per* Bandura's SCT (Bandura, 1977:195; Schunk & DiBenedetto, 2020:3). A positive appraisal of efficacy by other members of the multi-disciplinary team, who respect and recognise the nurse specialists' specialised skills, encourages the application of those specialised skills and motivates the individual to persist in their effort to perform them. Reciprocally, the resulting performance creates the opportunity for further recognition, respect, and credibility of trauma and emergency nurse specialists (Wood & Bandura, 1989:362). Participant 5 distinctly portrayed this reciprocal relationship between recognition and use of specialised skills in this statement:

> *"In order for you to get the acknowledgement you should actually be able to practice [laughing], for them to pick up and see that you do know something a bit more than the next person*".

5.3.2 Objective 2: To explore and describe aspects that act as barriers relevant to the implementation of specialised skills by trauma and emergency nurse specialists in their practice within the public health sector of the Western Cape Province

5.3.2.1 Individualistic influences

Individual influences acting as barriers reflect in the findings of this study as a loss of motivation to practice optimally. Trauma and emergency nurse specialists recalled abandoning efforts to implement their specialised skills and reverting to their familiar practice before specialised training. This unfortunate reality of trauma and emergency nurse specialists regressing and no longer applying their specialised skills, results in low productivity and suboptimal benefit from the potential of those skills to improve patient care and outcomes.

This study identified their loss of motivation and abandonment of specialised skills as individual influences that hinder utilisation of skills. However, it should be noted that the consideration of personal characteristics such as tenacity and resilience fell outside the scope of the research objectives.

Another possible explanation relating to personal influences that transpired in this study was a lack of self-confidence in implementing specialised skills in practice. Firstly, there was a lack of confidence arising from a shortage of experience in trauma and emergency practice before enrolling in the post-basic nurse specialist course. This was reported in terms of difficulties in applying theory in practice without specific prior experience, causing students to struggle during the course, as well as when they return to practice after the course. The effect of prior inexperience (less than five years prior practice experience) on skills implementation after further education, was also questioned by Barnhill *et al.* (2012:34–35) as a possible barrier to skills application in practice. One very specific factor at this study's settings was that unit managers who know potential candidates and understand their trauma and emergency experience, nevertheless have little input in the selection of employees to attend post-basic training courses. Furthermore, the required and very specific trauma and emergency discipline practice experience of two years, is considered low priority by the employer's selection committee. Secondly, participants frequently indicated a lack of confidence in their specialised skills because of the lack of opportunities to practice them and thereby maintain proficiency. This finding draws attention to the importance of being able to perform skills actively if they are to be recognised and valued, and as such, support the sustainability of these nurse specialists' confidence in their skills. The sub-optimal usage of specialised skills means that human resources are not being used cost-effectively (Sise *et al.*, 2011:560). Moreover, there are negative impacts on staff well-being in terms of motivation and job satisfaction derived from improved patient care (Lloyd-Rees, 2016:50). Low productivity may also manifest as warning signs that staff interests are at risk in the emergency department (Fenwick *et al*., 2020:4).

Some participants reported that they had abandoned their attempts to utilise their specialised skills. Wood and Bandura (1989) regarded this behaviour in terms of a lack of motivation and as an indicator of individuals accepting mediocre performance behaviour. When individuals fail to get results, or doubt their skill competency, experience challenges, or observe no value or benefit of new performance behaviour, they can lose motivation and are more likely to abandon newly acquired skills (Wood & Bandura, 1989:363-365,368). One can align this manifestation of an individual's influence as a barrier to specialised skill implementation, with Bandura's (1986) model of reciprocal interactions. This alignment indicates that the loss of

individual motivation, interest, and confidence in the performance of specialised skills bi-directionally inhibits behaviour in performing skills. Unfortunately, individual motivation fades whenever trauma and emergency nurse specialists give up and lose interest in using their critical skills to improve patient outcomes. This will lead to a downward spiral of hindered application of specialised skills, and abandoning efforts and perseverance to implement them. These reciprocal influences were portrayed by participants as "slowly but surely shrinking" back into just following orders, not taking the initiative for implementing specialised skills and getting so used to a monotonous work routine where specialised skills do not matter anymore. The following section will discuss the role of the external environment as the third reciprocal determinant of propensity to use specialised skills. That section will examine the role of the environment in this loss of motivation and confidence in performing specialised skills and will describe how this acts as a barrier to using specialised skills.

5.3.2.2 Organisational context

An interpretation of data obtained in this study suggests that the physical practice environment of trauma and emergency units poses a barrier when trauma and emergency nurse specialists strive to implement their special skills to meet health system demands. There is a growing number of vulnerable households that cannot afford private healthcare because of socio-economic deterioration in the Western Cape (WCDOH, 2019a:40). These overwhelm the capacity of trauma and emergency units in terms of equipped bed spaces available to provide appropriate patient care. This creates challenges that are nearly impossible to overcome, where nurse specialists have to prioritise clearing crowds and nursing patients waiting in passages for medical care. There are reports of ineffective planning and design of space in trauma and emergency units combined with inefficient referral processes and blocked beds; these reports are confirmed by Hardcastle *et al.* (2016). These authors explain that up to 70% of all trauma cases are initially transported to district-level hospitals with limited basic resuscitation capacities, suboptimal surgical capability and after-hours imaging availability; this causes a backlog of patients within the South African public sector's referral pathways (Hardcastle *et al.*, 2016:182–183). This results in inappropriate long-term ICU patients being nursed in trauma and emergency units while waiting for referral beds in either a tertiary hospital or within the facility itself. Therefore, trauma and emergency nurse specialists have to prioritise routine care of long-term patients who do not require their specific specialised skills. This hinders the use of their own trauma and emergency specialty skills.

Additionally, patients visit the trauma and emergency units rather than the primary healthcare clinics and by doing so, contribute to the large patient numbers. They block beds and interrupt the management of patients who do not require the nurse specialists' trauma and emergency

skills. The Western Cape still faces challenges in integrating the management of communicable diseases such as HIV and TB with other services as well as with tracing, treating and retention of TB patients (WCDOH, 2019b:12). As outlined in the literature review in Chapter 2, the burden of these medical conditions overflows to emergency care. Hence, primary healthcare protocols have to be initiated in acute emergency care settings by emergency nurse specialists who are not trained as clinical nurse practitioners in primary healthcare. Consequently, trauma and emergency specialised skills do not complement the primary healthcare needs of the patients presenting in their unit, resulting in barriers to the use of the specialised nurses' skills. A meta synthesis provides reasons for primary care or non-urgent visits to emergency departments in terms of the patient's perception of the acuity of the ailment in question and access barriers to primary care. Patients can also perceive hospital based and emergency care as being superior in addressing needs (Vogel, Rising, Jones, Bowden, Ginde *et al.*, 2019:2617). However, there is a lack of research in South Africa relating to this specific barrier in trauma and emergency specialists' practice. This shortage underlines the current gap in scientific knowledge and supports the need for further research.

The results obtained during this study suggest that trauma and emergency specialised skills are not used optimally in the nurse specialists' practice settings. This could allow for some understanding of why participants become disillusioned about their acquired specialised skills. Moreover, trauma and emergency nurse specialists lack opportunities to implement what they have gained through mastering higher-level knowledge and skills. This finding resonates with findings of Pelletier *et al.* (2003:441) in Australia on the reasons for sub-optimal behaviour in applying skills after post-graduate study.

Some participants of this study revealed a scarcity of practice opportunities for implementing discipline-specific specialised skills. This was because trauma and emergency nurse specialists were allocated to areas or units requiring only routine general nursing skills. Furthermore, the performance of advanced life support competencies such as cardioversion and defibrillation by trauma and emergency nurse specialists, are frankly not allowed in some practice settings.

All these factors were presented in the study data's organisational context, limiting the ability of trauma and emergency nurse specialists to implement their specialised skills and as such they reveal barriers to specialised nursing. These findings support Bandura's theoretical explanation of how the external environment potentially hinders the application of skills. When the external environment has a limiting nature and represents a source of futility, individuals expect their competencies to have no instrumental value to an unresponsive milieu (Bandura, 1977:205). The concept of non-compliant external environments and their negative impact on

performance behaviour, was elaborated on by Wood and Bandura (1989). These writers considered the level of organisational constraints and restricted opportunities and indicated how these generate substantial challenges when people make persistent efforts to perform their skills (Wood & Bandura, 1989:374). Their theoretical explanation was that individuals approach environments that they perceive to be defiant, by making weak and futile performance attempts that breed further failure. This supports data interpretation of restrictive environments that establish barriers to specialised skill application. Conversely, futile performance attempts and failures enables authoritative and restricted practice environments and confirm the reciprocal influences of performance behaviour determinants reflected in study findings.

One participant reported a lack of support from the unit manager who insist that trauma and emergency nurse specialists are responsible for implementing specialised skills despite restrictive environmental barriers. Although this perception of support from a unit manager deviates from that of other participants, it nevertheless reflects the same interpretation of hospital-level support present in the study data. High patient volumes, as presented in patient statistics, mean that higher levels of hospital management have to prioritise using any nurse to provide nursing care in overburdened practice environments. As a result, trauma and emergency specialist nurses are deployed to fulfil any type of non-specialised nursing duty wherever necessary. This finding corresponds to that of a British study that reports diversion of emergency nurse practitioners (ENP) to other roles during periods of high staff absenteeism and increased service demands (McConnell, Slevin & McIlfatrick, 2013:81–82). As these authors indicate, this practice enforced by hospital management decreases the optimal use and recognition of the higher-level knowledge and skills of trauma and emergency specialists and further restricts opportunities for specialised skill implementation. Furthermore, Wolf *et al*. (2017:431) refer to institutional APRNs' practice barriers in emergency care settings and attribute these to insufficient management support. Likewise, a lack of understanding of the APRN role accentuates restrictive hospital leadership and policies in the external practice environment.

The final barrier in the external environment addresses the concern of safeguarding the mastered competencies of trauma and emergency nurse specialists. The findings of this study indicated that trauma and emergency nurse specialists face substantial barriers when striving to maintain their specialised skill proficiency by attending accredited courses or by frequently practicing their skills. The same conclusion was reached by other researchers when they identified barriers against ensuring proficiency or justifying the competencies of APRNs in emergency departments (Wolf *et al.*, 2017:432). Moreover, Jones and Powell *et al.* (2015:6–

7) report that managers underestimate the unique practice development needs and evolving support required to maintain current advanced practitioner competencies. The decline in safeguarding the skills of trauma and emergency nurse specialists is attributable to staff shortages which limit the ability of managers to send them for courses to keep their specialised skills up-to-date and compound barriers to specialised skill sustainability. McKenna *et al*. (2015:186) report the same barriers to professional development in Australia. Their study found that limited funding is available for course costs and for covering the cost of replacing trauma and emergency nurse specialists who attend accredited courses. Research findings describe deteriorating confidence in specialised skill competency due to deficient ongoing professional development opportunities for trauma and emergency nurse specialists. This finding correlates with the discussion of the importance of maintaining advanced skill proficiency by Lloyd-Rees (2016:52).

5.3.2.3 Role adversity

Some issues raised in the data obtained during this study required consideration of the nurse specialists' clinical leadership role to capture barriers against specialised skills utilisation as professional nurse clinical experts. The new SANC (2019a) competencies relating to emergency nurse specialists describe some specific domains: these include the quality of practice, non-clinical management and leadership competencies. For example, they require competency in providing practice skills of high quality that will extend considerations of patient safety beyond their own practice in order to effect change and integrate evidence-based safety practices according to national and international best practice guidelines (SANC, 2019a:17).

However, the reality of the immense practice burden faced by trauma and emergency nurse specialists was portrayed in the participants' narratives. Unrealistic workloads, insufficient staffing and inadequately equipped patient care environments all described their practice environments. An analysis of these challenges showed that participants often had to abandon their specific role as a nurse specialist to prioritise basic nursing care. These challenges were significant barriers against enabling trauma and emergency nurse specialists to function in their expected specialised role to ensure patient safety. As such, their critical role in identifying deterioration in a patient's status and implementing appropriate management to prevent serious complications, was compromised by impossibly difficult practice conditions. The critical nature of this finding is supported by researchers who relate long waiting times for medical evaluation to the need for patients to receive timely and quality assessment by trauma and emergency nurse specialists. Prior research has established the key role of those nurses in promoting safe patient care by means of early detection, management and preventing deterioration in patient status (Curtis, Brysiewicz, Shaban, Fry, Considine *et al*., 2020:1).

Regrettably, the findings of this study reflected that at times, it was almost impossible for trauma and emergency nurse specialists to perform this critical function in the research settings. Trauma staffing ratios for government services in South Africa propose a minimum of one trauma and emergency nurse specialist for every resuscitation bed, one for every other five patients and three enrolled nurses per ten patients (Hardcastle, 2016:182). Nevertheless, the staff complement of trauma and emergency nurse specialists on each shift in the two research settings did not even nearly meet this minimum human resource requirement for safe or efficient trauma care delivery.

This study provides new insight into the barriers facing trauma and emergency nurse specialists in their clinical leadership roles in the South African context. Study data relevant to the expectations of emergency nurse specialists to act as clinical nurse experts and nurse leaders, mainly depicted barriers to optimal uptake of their potential contribution to improving patient care outcomes. This finding resonates with a statement made by nurses, including one of South Africa's nurse leaders in the trauma and emergency speciality, that trauma and emergency nurses are often undervalued. Equally, their contribution towards providing global universal health coverage, as prioritised by the WHO, is notably underestimated (Curtis *et al.*, 2020:1). The data obtained in this study placed the multiple role expectations of trauma and emergency nurse specialists in the context of overseeing patient care provided by others, mentoring colleagues and teaching emergency nursing practice skills. Additionally, they are expected to supervise the quality of care in terms of patient safety in their practice environment. This frequently required the trauma and emergency nurse specialists to actively participate in cohesive inter-professional teamwork in a way described by Wolf *et al.* (2017:432). These writers identified the need for advanced practitioners to engage in collaboration with all members of the multi-disciplinary team. All these expectations of fulfilling multiple roles that emerged in the findings of this study, resemble the SANC competency requirements of emergency nurse specialist leadership (SANC, 2019a:19-20).

There is a striking resemblance between this study's findings in collective perceptions of resistance and competitive attitudes between professional groups, and the findings of international studies exploring barriers against fulfilling advanced nursing practice roles. Several international studies indicate that physician resistance and inter-professional conflict will inevitably exist because of the extended practice roles of advanced practitioners and the perceived role overlap (Donelan, DesRoches, Guzikowski, Dittus & Buerhaus, 2020:596; Dubree *et al*., 2015:45; Kleinpell *et al*., 2014:6). Some authors offer the possibility that physicians might perceive the advanced nurse practitioner as a threat (Dubree *et al*., 2015:45). The findings of this study indicated competitive attitudes, causing strained inter-professional

relations. This situation may also negatively influence the efficiency of advanced clinical practitioners in emergency units (Fenwick *et al.,* 2020:5).

Discouragingly, this study revealed a general disregard for the skills of trauma and emergency nurse specialists and the ignorance of junior medical staff regarding their unique leadership contribution. These factors impair inter-professional relations and hinder efficient multi-disciplinary teamwork. Likewise, a study conducted in America reports challenging inter-professional relationships because of insufficient mutual respect between nurse practitioners and junior medical doctors (Donelan *et al.*, 2020:598) and overall disrespect for speciality emergency nurses in Africa (Wolf *et al.*, 2012:177). Moreover, Kleinpell *et al.* (2014:9) report the same lack of respect for the nursing profession as a global issue.

Bandura's SCT (1977) relates the social influence of such detrimental inter-professional relationships by considering collective agency (Schunk, 2012:104). Trauma and emergency nurse specialists practice in a social environment as part of a collective agency, portrayed in the findings of this study as the role of these nurse specialists in multi-disciplinary trauma and emergency care. The concept of collective agency depicts the shared beliefs of what a group can achieve by working together (Schunk, 2012:104). Therefore, it could be established that dysfunctional collective agency interactions influence, and are influenced by group relations in the social environment. A group, as collective agency, can also be motivated by satisfactory patient outcomes to invest in a team effort to achieve common valued goals (Brennan, Bosch, Buchan & Green, 2013:12; Shortell, Marsteller, Lin, Pearson, Wu *et al.*, 2004:1046). This study found a lack of the core requirements for effective teamwork as demonstrated by disregard, ignorance and a lack of respect for the roles and contributions of nurse specialists in the collective agency. This situation is detrimental to inter-professional relations and multi-disciplinary team performance (Valentine, Nembhard & Edmondson, 2015:21). Alternatively, conflicting inter-professional relations within the collective agency may further impair recognition and respect for the roles, skills and contributions of trauma and emergency nurse specialists. This reciprocal hinderance of behaviour relating to skills implementation originates in the social environment since the influence of the collective agency will determine such behaviour. This may explain why some trauma and emergency nurse specialists abandon and give up on efforts to implement their specialised skills.

The study findings suggest that the cohesiveness of cross-functional inter-professional teams, and specifically trauma and emergency multi-disciplinary collaboration, was related to role ambiguity. This issue will be discussed next.

5.3.2.4 Role ambiguity

There is a general lack of awareness of the role and skill competencies of trauma and emergency nurse specialists that represents a barrier to the application of their specialised skills within the multi-disciplinary team. Moreover, the findings of this study suggest that junior doctors' ignorance, and regular rotation of interns, compound role confusion and disregard for the value of trauma and emergency nurse specialists' role and their specialised skill sets. These findings contribute to a clearer understanding of barriers to specialised skill utilisation due to interprofessional team challenges to collaborate effectively in coordinating appropriate and safe patient care in the research setting. The functioning of multi-disciplinary teams is complex in acute care settings. The formation of interdependent team functions calls for clear roles and delineated responsibility boundaries. Moreover, consultation, respect and bringing together of members' expertise support efficiency, staff productivity and work processes in practice environments (Brennan *et al.*, 2013:12; Valentine *et al.*, 2015:21). Donelan *et al.* (2020:592) further establish that expanded specialised roles, following on from higher-level education of professionals, create challenges in coordinating the functions and roles of members in multi-disciplinary teams.

Participants also reported role confusion between different categories of nurse as well as the differences between a professional nurse without specialised training and nurse specialists. The same sentiment was echoed in an American emergency care research setting on practice barriers of the APRN role (Wolf *et al.*, 2017:431) and in advanced nursing practice worldwide (Kleinpell *et al.*, 2014:9). Keating *et al.* (2010:151) go further to state that organisational role confusion presents a barrier to the sustainability of the role of nurse practitioners.

Providing clear roles and distinct responsibilities for all healthcare providers capitalise the full extent of their training and expertise to meet healthcare needs (Donelan *et al.*, 2020:599). This is imperative in settings with limited resources, in order to optimise the productivity of healthcare providers and to ensure value in trauma care (Sise *et al.*, 2011:560). South Africa requires an inter-disciplinary team approach to meet the demand for accessible and comprehensive healthcare. This calls for the recognition of trauma and emergency nurse specialists as being higher-level qualified professional nurses in the emergency team (Brysiewicz & Bruce, 2008:130). Fenwick *et al*. (2020:1) provide an interesting perspective when specifying that understanding the productivity of each healthcare provider group calls for well-defined roles and responsibilities of each group to ensure safe staffing levels in emergency care.

The findings of this study included perceptions that the competencies and skills of trauma and emergency nurse specialists overlap to some degree with some traditional care

responsibilities of physicians. Perceived conflict because of the skills overlap between nurse specialists and doctors resulted in participants withdrawing from multi-disciplinary team efforts and futile attempts to contribute as clinical nurse experts. This avoidance behaviour can be explained by the findings of a study by Janss, Rispens, Segers and Jehn (2012:46) that individual team members who perceive a potential for conflict and considerable power differences, behave in such a team with less motivation to voice their opinions and to act on their professional viewpoint. These authors also consider that unclear power allocation and expectations of conflict, arising from different perceptions of power distribution, may lead to serious conflict and harm to inter-professional relations.

Participants eloquently expressed their views that doctors treat them as if the nurse specialist cannot think in an advanced manner and should just 'take orders' and not participate in discussions. Moreover, they report having no 'voice' within the team since 'no one values' their opinion, and that they are not being 'noticed or recognised'. This collective view of their perceived role in the multi-disciplinary team reflected the participants' perceptions of the significant power differences between the nurse specialists and the medical team when their contribution is not valued or recognised. Furthermore, these clinical nurse experts have no clear role functions or specialised responsibilities within the multi-disciplinary team and this situation replicates an unclear power distribution between these professional groups. Doctors usually applied their personal preferences to guide patient care, rather than the evidence-based practices that the trauma and emergency nurse specialists learned and mastered during post-basic training. Therefore, doctor's preferences could be identified as a barrier to optimal implementation of trauma and nurse specialists' specialised skills. This also supported the perception of significant power differences, since specialised nurses are forced to provide care according to the personal preference of a doctor because such doctors 'don't want you to disturb their routine.' All these findings represent social influences in the external environment that hinder the optimal role function of trauma and emergency nurse specialists in their practice. These findings relate to Bandura's SCT (1977) in that social interactions in the external environment act as vicarious sources of information on one's degree of self-efficacy (Bandura, 1977:195). Trauma and emergency nurse specialists receive social feedback that others are not considering their role as clinical nurse experts, or that other members of the multi-disciplinary team do not value or recognise their skills as negative vicarious evaluation of their self-efficacy. If this negative feedback persists, it will affect an individual's competency beliefs and will discourage persistent efforts in task implementation and task choice. In this study, negative feedback was reported to cause withdrawal from multi-disciplinary team efforts and waning motivation to contribute to patient care by offering professional opinions and performing specialised skills. The reciprocal model of Bandura

(1986) can identify disregard for their specialised skills and value as clinical nurse experts in the multi-disciplinary team, as both the cause and effect of nurse specialists' withdrawal from multi-disciplinary team efforts and limited efforts to implement specialised skills in patient care teams.

The role of trauma and emergency nurse specialists in South Africa was neither developed nor intended to take over physician responsibilities. In developed countries, advanced practice nursing roles entail education at master's level to allow complete autonomy in the assessment and management of trauma and emergency patients. However, post-basic education of the nurse specialist in South Africa does not prepare them for completely taking over some physician responsibilities. In 1977, the SANC indicated that nurse specialists are trained to address the need for improvement in nursing science, biomedical developments and to allow for formal recognition for clinical nursing expertise (Bell, 2005:36). Alternatively, it could be argued that the goal of nurse specialists' training is to provide more efficient, safe and evidence-based nursing care as expert nursing clinicians in a specific clinical area to improve healthcare delivery in partnership with the multi-disciplinary healthcare team. Wolf *et al.* (2012:178) established that baccalaureate and master's level education requirements for advanced nursing practitioners are unrealistic in the African context. However, these authors acknowledge the importance of developing specific practice roles for nurses educated to higher levels, such as nurse specialists, in the emergency care discipline. They also advocate for recognition of these highly educated nurses as practice leaders in their organisations (Wolf *et al.*, 2012:178). Nevertheless, the specific practice role and designated responsibilities of the trauma and emergency nurse specialist remains a topic of discussion with slow progress in resolving role confusion and role adversities that hinder their specialised practice. Regardless of critical healthcare needs in South Africa, their role has not been facilitated by legislation and practice policies (Brysiewicz & Bruce, 2008:130). Regrettably, this statement made nearly 13 years ago still rings true today and limits their role considerably in the multi-disciplinary team critical for best-practice trauma and emergency care (Collins *et al.*, 2014:353,356).

This study has highlighted perceptions that the Scope of Practice poses barriers to the optimal utilisation of trauma and emergency nurse specialists' skills. This finding is in keeping with international scientific evidence described in various research studies that identify advanced nursing practice barriers (Kleinpell *et al.*, 2014:9; Wolf *et al.*, 2017:431). It should be noted that prohibitive legislation restricts trauma and emergency nurses' practice and this has detrimental consequences for healthcare users in emergency settings with already-limited resources (Brysiewicz & Bruce, 2008:130). A South African literature review indicates that

global healthcare changes call for a review of current Scope of Practice issues to ensure quality of care and well-being of nurses (Feringa, De Swardt & Havenga, 2018:87). The findings of this study showed that participants lack the assurance that their Scope of Practice will protect their specialised skills, even when they feel proficient in performing a skill that they mastered in their post-basic training. It was implied that participants would rather not perform a specialised skill than initiate treatment on their own, even if they expressed confidence in their skills and their assessment of patient needs. Although they acknowledged that delayed treatment would be detrimental to patient outcomes, their perception of Scope of Practice restriction forced them to be on the safe side and wait for doctor's orders. It would appear that trauma and emergency nurse specialists would continue to monitor such patients, implementing their critical thinking and specialised assessment skills until they intuitively decide that the patient cannot wait any longer for medical intervention. This aligns with a statement made by Bell (2005:5) to the effect that nurses often resolve to crisis management of patients since experienced mentors are not available to interpret and apply Scope of Practice implications in the practice environment. It was noteworthy that participants would often fall back on a more comfortable role as an advocate for critically ill and vulnerable patients, and would then have no reservations in mobilising resources to improve patient outcomes.

One could argue that trauma and emergency nurse specialists feel more confident that patient advocacy does fall within their Scope of Practice as a professional nurse (SANC,1984). Moreover, even a professional nurse without specialisation is legally obliged to implement life-saving treatment in an emergency, based on their level of expertise and training (Bell, 2005:22; SANC, 2014:4). Another possible explanation could be that any actions or demand for medical review and intervention are professionally more acceptable in their advocacy role, in a care environment dominated by the medical profession. As mentioned in earlier discussions of role ambiguity, the perception of restrictive Scope of Practice legislation may reflect a collective lack of awareness of verified specialised skill competencies and undefined organisational role boundaries of the trauma and emergency nurse specialists' practice (Dubree *et al.*, 2015:45). Any exploration of why trauma and emergency nurse specialists do not feel comfortable in terms of their Scope of Practice, in performing specialised skills that they mastered and were verified to be competent in during post-basic study, fell outside the scope of this research study. Therefore, the researcher could only surmise that the way in which participants interpret their Scope of Practice poses a barrier to specialised skill implementation. The interpretation of data collected during this study related to Scope of Practice barriers, aligned with the findings of Bell (2005:164). In this seminal work, the author identifies limited discussion and research to improve interpretation of the Scope of Practice of nurse specialist as barriers to

specialised practice, rather than the Scope of Practice itself. However, when nurse specialists practice below the boundaries set out by their Scope of Practice for whatever reason, skill proficiency cannot be maintained and that in itself poses a barrier to specialised skill utilisation.

The interpretation of the data acquired in this study reinforced the view that perceived Scope of Practice barriers are associated with inappropriate job descriptions of trauma and emergency nurse specialists. A lack of clarity and the existence of confusion regarding the legal boundaries prescribed by the professionally regulated Scope of Practice for the nurse specialist, could not be addressed by the employer's job description to specify their specific role expectations and duties. Most participants reported that they do not have a specific job description that aligns with their specialised clinical skills, or that requires them to act as clinical nurse leaders in delivering a higher level of nursing care. Also, none of the participants reported that their job description was adjusted after they completed their post-basic trauma and emergency specialisation. It was noteworthy to find that most participants responded that they were not sure, or did not know how to answer, when asked to share their opinion on different job descriptions for generalist professional nurses and nurse specialists. Their bewildered and vague responses often reflected discussions by stakeholders on the same topic. Therefore, the researcher concluded that both the perceived Scope of Practice barriers and the absence of a specific job description for trauma and emergency nurse specialists contributed to role confusion and specialised practice barriers. Moreover, the role confusion between a generalist professional nurse and a nurse specialist clearly compounded organisational barriers to utilisation of skills, as well as inter-professional conflict that impeded optimal multi-disciplinary teamwork. In a modest attempt to understand and interpret the insider's perspective of trauma and emergency nurse specialists' practice, the researcher often wondered whether this finding did not represent the essence of specialised practice barriers.

5.4 LIMITATIONS OF THE STUDY

The identification of study limitations allows for the acknowledgment of any weaknesses in the research methods of a study (Creswell & Creswell, 2018:273) that act to limit the credibility of the study's findings and also limit the potential to generalise those findings to other settings (Grove *et al.*, 2015:48).

The COVID-19 pandemic lockdown restrictions prevented face-to-face interaction during the recruitment and data collection phases of this study. An amended study proposal was submitted and approved by the University of Stellenbosch HREC to consider alternative safe and ethical methods of participant recruitment and data collection during this unprecedented

healthcare challenge. The recruitment of participants, communication and participant consent required innovative and flexible use of electronic platforms. The researcher spent considerable time and effort in order to identify and accommodate potential participants in ways with which they were most comfortable, for example WhatsApp, email or regular phone calls. The researcher also asked trauma and emergency nurse specialists, with whom she was acquainted, to introduce her to their colleagues whom she did not know. This appeared to overcome barriers in communicating with and recruiting participants. However, some potential participants indicated that they did not wish to participate in the research study as they were not coping very well with family responsibilities and work-related stress because of the COVID-19 pandemic. The death of a loved and valued staff member at one of the research settings contributed to staff feeling overwhelmed and lost, therefore the researcher respected their refusal and instead, offered support.

Self-reported data, obtained during interviews, could not be independently verified and the unit manager's perspective was limited to one participant to possibly triangulate data. Although all unit managers were approached, they reported that heavy work demands prevented them from participating. Self-reported barriers and facilitators of skill implementation, and narrated practice experiences, could not be verified to be actual behaviour. However, the data collected addressed the research question and resonated remarkably with the available international literature on barriers and facilitators that impact advanced nursing practice. In view of the lack of academic literature on trauma and emergency nurse specialists' practice in the South African context, the study findings could not be supported by context-appropriate scientific evidence. In order to overcome this limitation, future research may consider a wider approach to the triangulation of data which would include more stakeholders in trauma and emergency care, such as hospital-level management and trauma and emergency physicians.

5.5 RECOMMENDATIONS

5.5.1 Recommendation 1: Employer specific job description for trauma and emergency nurse specialists

The findings of this study identify the need for clear and distinct job descriptions that align with the employer's unique trauma and emergency practice environment. The optimal uptake of the trauma and emergency nurse specialists' skills as well as their leadership role as clinical nurse experts will depend on formal organisational recognition captured in a job description that corresponds with their level of specialised education (Donelan *et al.*, 2020:599). Moreover, well-defined roles and responsibilities of each healthcare provider group assist in promoting staff productivity and safe staffing levels in emergency care (Fenwick *et al*., 2020:1).This is imperative in settings with limited resources where the aim is to optimise the productivity of trauma and emergency nurse specialists and ensure quality in trauma care (Sise *et al.*, 2011:560). The WCDOH places substantial emphasis on improving the productivity and efficiency of its staff in safeguarding health service delivery and patient-centred care (WCDOH, 2019a:162). Organisational empowerment of trauma and emergency nurse specialists can be achieved by employer-specific job descriptions to support productivity and their ability to optimally contribute to quality patient-centred care.

5.5.2 Recommendation 2: Improve awareness of trauma and emergency nurse specialists' specialised skills

Inter-disciplinary team approaches are required to meet the demand for accessible and comprehensive healthcare in South Africa. This calls for the recognition of trauma and emergency nurse specialists as being higher-level qualified professional nurses in the emergency team (Brysiewicz & Bruce, 2008:130). The findings of this study indicate a significant lack of awareness of the specialised skills of these nurses and their mastered competencies. Inter-professional awareness as well as support from senior hospital management could be facilitated by further trauma and emergency stakeholder discussions, coordinated in the form of an initiative by the Directorate of Nursing and WCDOH. Trauma and emergency nurse specialist leaders and the ENSSA could also be involved in inter-professional awareness campaigns. Furthermore, trauma and emergency nurse specialists and the ENSSA should be represented in discipline-specific decision-making processes at facility, provincial and national levels to improve awareness of their contribution as clinical trauma and emergency experts.

5.5.3 Recommendation 3: Facility-specific discussions of the Scope of Practice of trauma and emergency nurse specialists

The findings of this study revealed that the interpretation of the Scope of Practice of trauma and emergency nurse specialists needs to be addressed at unit and facility level to clarify any perceived barriers imposed by restrictive legislation. Scope of Practice discussions should be initiated by trauma and emergency nurse specialist leaders to ensure that the nursing profession takes ownership of its own professional development. Scope of Practice interpretation should consider the expanded knowledge and skills gained with the further education of professional nurses and should clarify how this applies to the specific context of employment in trauma and emergency units. The professional regulation of nursing practice remains the responsibility of the nursing profession. However, inclusion of all stakeholders in trauma and emergency care in Scope of Practice discussions may support the implementation of a Scope of Practice interpretation in the practice environment (Bell, 2005:164). This may also portray the valued collaborative inter-professional teamwork needed to ensure positive outcomes for all involved in the same way that the goal of discussions of optimal multi-disciplinary teamwork should improve patient outcomes in practice.

5.5.4 Recommendation 4: Safeguard the skills proficiency of trauma and emergency nurse specialists

Trauma and emergency nurse specialists should be supported in their endeavors to maintain certification in Advanced Life Support and Triage training. These critical skills need to be updated according to prescribed accredited programs, to ensure verifiable proficiency in specialised skills. Furthermore, trauma and emergency nurse specialists need practice opportunities to remain confident in performing the specialised skills mastered during their post-basic training (Pelletier *et al.*, 2003:441). Organisational support and awareness of the medical teams in trauma and emergency units should actively create and facilitate opportunities for these nurse specialists to practice, refine and build confidence in their specialised skills. This will also contribute substantially towards creating awareness of their specialised skills and will empower the trauma and emergency nurse specialists' role as clinical nurse experts in the multi-disciplinary team. SOP's that allow specialist nurses to act decisively in critical and time-sensitive patient situations were identified by participants as a most important facilitator of specialised skill implementation. Therefore, compiling and implementing SOP's that consider the specialised skills of nurse specialists and recognise their ability to contribute to timely interventions in trauma and emergency setting, should be initiated by the multi-disciplinary team. Moreover, the inputs of trauma and emergency nurse

specialists must be considered as key contributions by the clinical governance committees which develop those SOP's.

Research findings suggest that trauma and emergency nurse specialists who are allowed and supported to utilise their advanced life support skills, combined with their specialised knowledge, excel in their roles as clinical nurse experts. Here, reference should be made to some especially relevant international literature describing how empowered nurses, trained to higher levels in trauma and emergency care, can be utilised to the advantage of critically ill patients in desperate need for intervention (Dubree *et al.*, 2015:44-45; Jones & Kapu, 2013:n.p.; Kapu *et al.*, 2012:51).

5.5.5 Future research

The following areas for future research are proposed:

- A similar study with a wider approach to the triangulation of data. That study to include more stakeholders in trauma and emergency care, such as hospital-level management and trauma and emergency physicians.
- The practice barriers and facilitators of emergency nurse specialists in settings that differ from this current study; for example, the private sector, smaller rural hospitals and other provinces in South Africa.
- The perceptions of high-level hospital management regarding the emergency nurse specialist's role and functions at their facility.
- Interpretation of Scope of Practice as related to the practice of the emergency nurse specialists.
- The advantages of employing emergency nurse specialists in the South African healthcare context.
- The impact of the advanced education of emergency nurse specialists on quality indicators of emergency care in South Africa.
- Empowerment of emergency nurse specialists in their role as clinical nurse leaders.
- The sustainability of emergency nurse specialists' skills and their professional role.
- Personal characteristics that sustain the motivation of emergency nurse specialists in challenging practice environments.
- The effect of sub-optimal specialised practice on the morale of emergency nurse specialists.
- The role of clinical experience in effective practice of emergency nurse specialists.
- The clinical leadership role of emergency nurse specialists in multi-disciplinary emergency care.

- The appropriateness of educational programs that aim to address practice demands for emergency nurse specialists' skills.
- Job description policy development for the emergency nurse specialist.
- Exploration of practice demands for emergency nurse specialists' skills and clinical leadership role.

5.6 DISSEMINATION

The findings of this study will be disseminated to the two facilities of the research settings. It will be in the form of a de-identified report on findings, so that facilities will be unable to identify participants or their own trauma and emergency unit(s). This report will include recommendations for improving the implementation of the specialised skills of trauma and emergency nurses in their practice, and will enable the readers to consider the practicability and viability of recommended actions at their facility.

A copy of this thesis will be shared with the participants who indicated interest in the study topic and who requested to see the findings and final product of the thesis. Moreover, a professionally printed copy will be donated to the library of the Western Cape College of Nursing as per the standard practice for lecturers completing their master's degrees. An electronic version of this thesis will be uploaded on the University of Stellenbosch electronic platform SUNscholar to facilitate the academic sharing of students' research studies.

The researcher plans to publish an article on the study and its findings in a peer-reviewed journal, to share practice barriers and facilitators encountered by trauma and emergency nurse specialists as identified in this study.

5.7 CONCLUSION

This chapter discussed the findings of this study as they relate to each of the research objectives. It also clarified how the findings answered the research question. Furthermore, it was shown how barriers and facilitators that affect the performance of specialised skills influence and are influenced by the practice environment and individualistic characteristics according to Bandura's SCT (1977) and the SCT's model of reciprocal interactions (Wood & Bandura, 1989:362).

The findings of the study suggest that the skills of trauma and emergency nurses are not used optimally in their practice settings due to barriers within the organisational context and practice environment. These barriers included heavy workloads, overcrowding in trauma and emergency units, a lack of enough equipped bed spaces to deliver appropriate care, inappropriate patients boarding in trauma and emergency units because of blocked referral

pathways, and staffing levels or allocation of staff members. Moreover, there was a lack of awareness of specialised skills and of the specific role functions of trauma and emergency nurse specialists. This strained inter-professional relations and multi-disciplinary teamwork and also compounded a lack of opportunities to practice skills. The findings also revealed that the optimal use of specialised skills was hampered by several issues such as perceived restrictions in terms of the Scope of Practice, a loss of confidence in specialised skills because of very few practice opportunities and expired ALS and Triage certification.

On the other hand, the use of specialised skills was facilitated by strong motivation within the individual concerned, patient advocacy, supportive unit managers and expert role models.

Finally, recommendations were suggested to address the reported needs of trauma and emergency nurse specialists and to empower them to perform as clinical nurse experts and contribute to the delivery of patient-centred, timely and accessible healthcare to the South African population.

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APPENDICES

APPENDIX 1: Interview guide

Please tell me everything about your experiences in terms of the implementation or utilisation of your specialised skills as a trauma and emergency nurse specialist in your trauma and emergency practice.

(Possible probing questions)

- How did you feel when you returned to practice in your own hospital after your training?
- How did you experience your unit's expectations when you returned after successfully completing your post basic training?

Please tell me from your experience, what factors enabled, or made it easier, for you to apply your specialised skills as a trauma and emergency nurse specialist in your trauma and emergency unit?

(Possible probing questions)

- Tell me about your experiences when you could apply your advanced skills in trauma and emergency in your practice?
- Please tell me how do you feel about applying your advanced knowledge and skills of trauma and emergency nursing science in your practice
- Please tell me how you experienced any expectations of you to practice differently once you completed post basic training in trauma and emergency nursing?
- What effect do you believe will implementing your advanced skills in trauma and emergency nursing have on:
    - delivery of trauma and emergency care?
    - on you as an individual / the nursing profession?

Please tell me what you experienced as barriers that made it difficult for you to apply your specialised skills as a trauma and emergency nurse specialist in your trauma and emergency unit?

(Possible probing questions

- Can you please tell me about your experience of recognition from other professionals whenever you implement your advanced trauma and emergency nursing skills?
- Please tell me how you perceived the support from your employer to implement your advanced skills in your practice?

Do you have any recommendations with regards to the utilisation of your advanced skills as a trauma and emergency nurse specialist in your trauma and emergency unit?
(Possible probing questions)

- In your opinion, what can you suggest how the future trauma and emergency care / nurse specialist role should be adjusted in terms of implementing their advanced skills?
- Please tell me what do you think about a different job-description for a trauma and emergency nurse specialist from that of a registered nurse with only experience in trauma and emergency without further specialisation?

APPENDIX 2: Ethical approval from Stellenbosch University

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

Approval Notice

New Application

12/02/2020

Project ID :13009

HREC Reference No: S19/10/277

Project Title: Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of advanced skills in their practice in the public health sector in Western Cape Province

Dear Mrs Haroldene Stevens

The **Response to Modifications** received on 10/02/2020 10:19 was reviewed by members of **Health Research Ethics Committee** via **expedited** review procedures on 11/02/2020 and was approved.

Please note the following information about your approved research protocol:

Protocol Approval Date: 11 February 2020

Protocol Expiry Date: 10 February 2021

Please remember to use your Project ID 13009 and Ethics Reference Number S19/10/277 on any documents or correspondence with the HREC concerning your research protocol.

Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review

Translation of the informed consent document(s) to the language(s) applicable to your study participants should now be submitted to the HREC.

Please note you can submit your progress report through the online ethics application process, available at: Links Application Form Direct Link and the application should be submitted to the HREC before the year has expired. Please see *Forms and Instructions* on our HREC website (www.sun.ac.za/healthresearchethics) for guidance on how to submit a progress report.

The HREC will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility, permission must still be obtained from the relevant authorities (Western Cape Departement of Health and/or City Health) to conduct the research as stated in the protocol. Please consult the Western Cape Government website for access to the online Health Research Approval Process, see: https://www.westerncape.gov.za/general-publication/health-research-approval-process. Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and instructions, please visit: Forms and Instructions on our HREC website https://applyethics.sun.ac.za/ProjectView/Index/13009

If you have any questions or need further assistance, please contact the HREC office at 021 938 9677.

Yours sincerely,

Elvira Rohland
Health Research Ethics Committee 2

National Health Research Ethics Council (NHREC) Registration Number:

REC-130408-012 (HREC1)•REC-230208-010 (HREC2)

Federal Wide Assurance Number: 00001372

APPENDIX 3: Amendment ethical approval from Stellenbosch University

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

Approval Letter
Amendment

02/07/2020

Project ID: 13009

Ethics Reference No: S19/10/277

Project Title: Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of advanced skills in their practice within the public health sector in the Western Cape Province

Dear Mrs Haroldene Stevens

Your amendment request dated 27/06/2020 19:26 refers.

The Health Research Ethics Committee (HREC) reviewed and approved the amended documentation through a rapid review process.

The following amendment was reviewed and approved:

1. Data collection method: Change from face-to-face interviews to virtual interviews on Whatsapp video calling due to COVID-19 pandemic.

Where to submit any documentation

Kindly note that the HREC uses an electronic ethics review management system, *Infonetica*, to manage ethics applications and ethics review process. To submit any documentation to HREC, please click on the following link: https://applyethics.sun.ac.za.

Please remember to use your project ID 13009 and ethics reference number S19/10/277 on any documents or correspondence with the HREC concerning your research protocol.

Yours sincerely,

Mrs. Brightness Nxumalo
Coordinator: Health Research Ethics Committee 2

National Health Research Ethics Council (NHREC) Registration Number:

REC-130408-012 (HREC1)•REC-230208-010 (HREC2)

Federal Wide Assurance Number: 00001372
Office of Human Research Protections (OHRP) Institutional Review Board (IRB) Number:
IRB0005240 (HREC1)•IRB0005239 (HREC2)

The Health Research Ethics Committee (HREC) complies with the SA National Health Act No. 61 of 2003 as it pertains to health research. The HREC abides by the ethical norms and principles for research, established by the World Medical Association (2013). Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects;the South African *Department of Health (2006). Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa (2nd edition)*; as well as the Department of Health (2015). Ethics in Health Research: Principles, Processes and Structures (2nd edition).

The Health Research Ethics Committee reviews research involving human subjects conducted or supported by the Department of Health and Human Services, or other federal departments or agencies that apply the Federal Policy for the Protection of Human Subjects to such research (United States Code of Federal Regulations Title 45 Part 46); and/or clinical investigations regulated by the Food and Drug Administration (FDA) of the Department of Health and Human Services.

APPENDIX 4: Permission obtained from National Department of Health

Gmail

Haroldene Stevens <stevensharoldene@gmail.com>

NHRD Submission Received - Automated Message (DO-NOT-REPLY)

Sabela Petros <Sabela.Petros@westerncape.gov.za> Sun, Jul 19, 2020 at 12:55 PM
To: Haroldene Stevens <stevensharoldene@gmail.com>
Cc: Tendani B Mabuda <Tendani.Mabuda@westerncape.gov.za>

Dear Mevrou Haroldene

Good day. Please be advised that the above study has been approved at [redacted] Contact Dr [redacted] before visiting the facility to arrange logistics contact details: [redacted], Tel:[redacted]

[Quoted text hidden]
[Quoted text hidden]

APPENDIX 5: Permission obtained from institutions

Western Cape Government
Health

[redacted]

Project ID: 13009

Ethics Reference: S19/10/277

TITLE: **Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of advanced skills in their practice in the public health sector in Western Cape Province.**

Dear Mrs Haroldene Stevens

PERMISSION TO CONDUCT YOUR RESEARCH AT [redacted]

1. In accordance with the Provincial Research Policy and [redacted] Notice No 40/2009, permission is hereby granted for you to conduct the above-mentioned research here at [redacted]

2. Researchers, in accessing Provincial health facilities, are expressing consent to provide the Department with an electronic copy of the final feedback within six months of completion of research. This can be submitted to the Provincial Research Co-Ordinator (Health.Research@westerncape.gov.za).

DR GG MARINUS
MANAGER: MEDICAL SERVICES

DR D ERASMUS
CHIEF EXECUTIVE OFFICER
Date: 5 March 2020

[redacted]

APPENDIX 6: Participant information leaflet and declaration of consent by participant and investigator

Participant consent form for research study

TITLE OF RESEARCH PROJECT: Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of advanced skills in their practice in the public health sector in Western Cape Province.

ETHICS REFERENCE NUMBER:
S19/10/277

DETAILS OF PRINCIPAL INVESTIGATOR (PI):
Mrs. Haroldene Stevens
20 Mill creek crescent, Sunningdale, 7441
PI Contact number: 082 6656480

* Required

Invitation for research study

We would like to invite you to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the study staff any questions about any part of this project that you do not fully understand. It is very important that you are completely satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is entirely voluntary and you are free to decline to participate. In other words, you may choose to take part, or you may choose not to take part. Nothing bad will come of it if you say no: it will not affect you negatively in any way whatsoever. Refusal to participate will involve no penalty or loss of benefits or reduction in employment to which you are otherwise entitled to. You are also free to withdraw from the study at any point, even if you do agree to take part initially.

This study has been approved by the Health Research Ethics Committee at Stellenbosch University. The study will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, the South African Guidelines for Good Clinical Practice (2006), the Medical Research Council (MRC) Ethical Guidelines for Research (2002), and the Department of Health Ethics in Health Research: Principles, Processes and Studies (2015).

What is this research study all about?

This study will be conducted at a tertiary hospital and a district hospital in the Cape Metropole. About ten to twelve participants will be recruited altogether for video call interviews by the researcher.
The researcher is interested in your unique experiences as a trauma and emergency nurse specialist in your practice environment. The study will aim to describe your perceptions and experiences about the implementation of your advanced trauma and emergency skills as a trauma and emergency nurse specialist in your practice after your training. This information will be gathered during a video call interview using Whatsapp with you by the researcher at a time convenient to you when you are off duty. You will be reimbursed for your time and data usage for the video call interview with a once off R100 data bundle.

Why do we invite you to participate?

You were invited to participate in this research because you are a qualified trauma and emergency nurse specialist employed at a government hospital. The researcher wants to investigate and understand your perceptions of factors that influenced the utilisation of the advanced skills you mastered during your training as a specialist in your field.

What will your responsibilities be?

If you agree to take part in this study, you will be asked to participate in an initial video call interview using Whatsapp that will take about an hour when you are off duty. The researcher will ask broad questions about the implementation of your advanced skills in practice that focus on factors what helped you or made it easier, as well as what you perceived as difficulties. Follow up questions will be asked to clarify your responses and improve the researcher's understanding of what you are trying to say. A follow-up appointment will be made after the researcher analysed the data to confirm that the analysis truly reflects your expressed experiences.

Will you benefit from taking part in this research?

You may not benefit directly or immediately from this study. Potential future benefits from knowledge of the dynamics involved in the implementation of advanced practice skills of trauma and emergency nurse specialist may include the following:

- Improved role understanding and support for the empowering of the trauma and emergency nurse specialist
- Effective utilisation of specialised trauma and emergency skills
- Improved service delivery in terms of quality, cost effectiveness and accessible trauma and emergency care

Are there any risks involved in your taking part in this research?

The level of risk involved to you is minimal in this study, and will not cause more harm than what is present in your ordinary daily work life. Please inform the researcher at any time during the study if you feel any distress caused by the investigation, and the researcher will facilitate referral to the employee health and wellness program counselling service available to government employees. This research study will use online video calling on Whatsapp for interviews to adhere to Covid 19 lockdown travel restrictions, and to protect you from undue exposure to the virus.

If you do not agree to take part, what alternatives do you have?

There will be no penalty involved if you refuse to participate in this research study. Your refusal will not have any effect on your future employment opportunities or approval for further studies from your employing hospital.

Who will have access to your information?

Any information you share with me during this study and that could possibly identify you as a participant will be protected. This will be done by allocating a codename to you and the original allocation list will be saved separately from interview data on a USB drive in a password-protected file. Your responses that was generated by completing this form, will only be sent to the researcher with no accessibility to others, and saved in a password protected file. Reporting of findings will only be linked to your allocated codename to ensure you remain anonymous and it cannot be associated with you or your employing hospital, to protect your identity. Research findings will also be reported without linking your responses to your specific hospital or unit.

Field notes and transcript documents of your interview will be stored in a locked safe separate from the original code allocation list. All electronic data and audio recordings of your interview will be locked in two different locations such as two USB drives in password-protected files to prevent the loss of your interview data in case of computer failure. Only the researcher and study supervisor will have access to this data. All data will be destroyed after 5 years.

You have the right to withdraw from the study at any time and request that your data be destroyed and not used in reporting of study findings. Findings of this study will be submitted in a Master's thesis to the University of Stellenbosch and may be used in an article of the study in a journal without linking your responses to your identity or employing unit or hospital.

Is there anything else that you should know or do?

- You can phone, WhatsApp or SMS Mrs. Haroldene Stevens at 082 6656480 or email stevensharoldene@gmail.com if you have any further queries or encounter any problems.
- You can phone the Health Research Ethics Committee at 021 938 9677/9819 if there still is something that your study investigator has not explained to you, or if you have a complaint.
- You will have a copy of this information and consent form for you to keep safe when you submit your consent on this Google form

1. Declaration by participant: Please type your Name and Surname. Please note you will be allocated a codename and the original allocation list will be saved separately from interview data on a USB drive in a password-protected file. The information you provide on this Google form cannot be accessed by others since accessibility is restricted and only the primary investigator (me) will have access to this information. Reporting of findings will only be linked to your allocated codename and your identity will never be revealed . *

2. I declare that: (Please check applicable boxes to indicate your agreement) *

Check all that apply.

- [ ] I have read this information and consent form, or it was read to me, and it is written in a language in which I am fluent and with which I am comfortable.
- [ ] I have had a chance to ask questions and I am satisfied that all my questions have been answered
- [ ] I understand that taking part in this study is voluntary, and I have not been pressurised to take part
- [ ] I may choose to leave the study at any time and nothing bad will come of it – I will not be penalised or prejudiced in any way.
- [ ] I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan that we have agreed on.

3. Please indicate below if you agree to take part in a research study entitled: Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of advanced skills in their practice. *

Mark only one oval.

- ◯ YES I agree to participate in this research study
- ◯ NO I choose NOT to participate in this research study

4. Please type in your cellphone number with your SERVICE PROVIDER e.g. MTN, Vodacom, Cell C or Telkom (Required for reimbursement of once-off R100 data bundle). The information you provide on this Google form cannot be accessed by others since accessibility is restricted and only the primary investigator (me) will have access to this information. *

Thank you

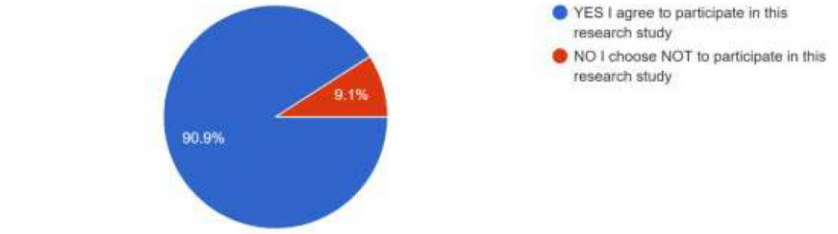
Thank you for taking time to complete this participant consent form for the study on Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of advanced skills in their practice in the public health sector in Western Cape Province.
Kind regards
Haroldene Stevens

APPENDIX 7: REPORT OF COMPLETED PARTICIPANT CONSENT

Report of completed participant consent submission as captured on Google drive

Please indicate below if you agree to take part in a research study entitled: Trauma and emergency nurse specialists' perceptions of factors that hind...mplementation of advanced skills in their practice.

11 responses



APPENDIX 8: EXTRACT OF TRANSCRIBED INTERVIEW

PARTICIPANT 2 INTERVIEW TRANSCRIPT	
HS:	Thank you again, very much for participating in my study. I allocated you an anonymous code name, so that the information we discuss will not be linked to your identity or your employing hospital. So, your anonymous code name will be Participant 2. So, getting to the discussion, please tell me everything about your experiences, in terms of the implementation or utilisation of your specialised skills as a trauma and emergency specialist in your trauma and emergency unit or your trauma and emergency practice. So, feel free, tell me everything you want.
P2:	Okay for or me, the knowledge that I gained being a specialist, has been an advantage and sometimes I think a disadvantage ne.. In terms of patients, if because of the things that I was taught during my course, I can easily now also say okay, this is a hemo or this is a pneumo or this is a MI. Doing ECG and identify my ST elevations and that. The disadvantages is, I think… for us, is you know, you work with new doctors, and they also have that book knowledge. And the want to first analyse the ECG when you can see: listen this is a MI. I know from experience, I know from, you know. So then you kind of like, step in where the doctor is supposed to lead you or, say ECG for when to start the Strep quickly. But, by the time, sometimes, they want to do all this, first do Trop T, first X-rays, first that. Then you feel like, listen man, this is a MI no matter what. Or you take to ECG, first write to the consultant to double check, then comes back to me to say okay, Sister, Dr is saying we can start strep, this is a MI. You see, so it's got a positive and a negative, but for me more positive because I know what I'm dealing with…I… because of what I've been taught, ja. So to me this is both negative for me and positive, but I think the positive is like standing out… because I feel confident you know, to see what I… what the patient is coming in with. And ja, to know that I'm capable to give the treatment I'm supposed to give and to give it quick. There shouldn't be a delayed in … ja.
HS:	Yes. So so basically what you are saying is, you have this experience, you have this knowledge but sometimes the doctors want to follow specific steps in protocols. Tell me more about that.
P2:	Ja...So example for a… for a pneumo, a stab chest, stab back maybe. Patient is cold, he's sweating, he's got a heart rate, he's got a low blood pressure and they still struggle with the

	… okay, IV is important, but to me would be a a drain, a ICD drain you know, connect the patient. My job is to connect them and to do all the vitals and then and then keep the vitals signs stable. And then still struggling with the drip, still, because he's cold he's peripherally … you know, shut down. But still struggling with the drip. If I say Doctor, just do an ICD!. Can you see?
HS:	I hear what you're saying, yes.
P2:	So there there is a… a lot lot of challenges in that terms. Then you get that doctor … okay I must listen to the Sister, do the ICD. The moment the ICD is in, I can even struggle with the drip now, because my ICD is in. And you see the change in the patient's condition.
HS:	Yes, I hear.
P2:	But a lot, a lot of that.
HS:	Would you say, since you say it's the protocol of the doctors that they are following, would you say that they made some provision for your advanced skills in that protocol that you they're trying to follow?
P2:	I don't think that ... some of them don't know that we are trauma trained. And and also you know we are still going according to our scope of practice mos. So I haven't read or I haven't seen an update on my scope of practice as a RN specialised. I don't know if it is. So sometimes we do step a little back. If it's like a crazy weekend, it was, you know we do things most of the time out of our scope of practice, not realising but I am trained to do this.
HS:	I hear what you're saying.
P2:	You see what I'm saying? So sometimes we sit with a lot of skills. A lot a lot of skills. But we do something about some … listen I feel like I'm going to put this ICD if the doctor don't put now. But then realising, what if I do something wrong it's going to come back to me, because take it to the page, the scope doesn't say you must put ICD. Can you see?
HS:	Yes, I hear you.
P2:	So if we have a lot a lot of that. Must I, must I? But I know what to do, *nè*? I know what to do. But I think that is a little bit, keeping us back from what we can do.

HS:	Or allowed to do within your scope of practice?
P2:	Yes. Some doctors feel like [name removed] been in this place for how many years. She knows, I will go with her. If she says ICD, I'm going to quickly do the ICD. So we would have that relationship with some of the doctors. And then you know some of them they don't trust us, you know, this is a sister, I'm supposed to do this thing must be back. It's like that sometimes, not all the time. If there was a doctor that I worked with a while then he's confident in me or he trusts me enough to say.. to do what I say. Should I put it like that? I don't want to put it like that.
HS:	Yes, I hear.
P2:	But to have my guidance. To say, Doctor, first do the ICD. I'm gonna… The vitals is on, the [inaudible 00:06:18] is writing my vitals. You do the ICD and I am going to try for the line and do the fluid at least. Then you go with that. But sometimes you must first do the IV line then come back, have an X-ray, listen twice, thrice if you can hear anything on the stethoscope, then decide to do the ICD. Can you see?
HS:	I hear you. So do…Do I understand you correctly that you feel in that that situation specifically what you explain now the, IV and the ICD, that you thought your skills in practice could influence the outcome of the patient?
P2:	Definitely. Definitely!
HS:	Tell me a little bit more about that.
P2:	Definitely it does, yes. Ja like I told you, even a simple thing like like the DKA. You know you do your blood gas and then to us if the sugar is, the blood glucose is elevated, they must come to resus. Doctor, do the blood gas. But sometimes clinically for me it's it's the patient is a DKA, you know there's that semi-sweet … when I used to work at [hospital name removed], there was an old consultant [name removed], he used to teach us about the semi-sweet smell, you smell that DKA patient. A lot of times I get it, but they still insist, wait, we first do the blood gas. But sometimes skill … I can do the IV line, connect my patient, start at least the fluid, give him the 10 units Actrapid. By the time the gas comes, the doctor is confirming DKA, but I already knew. For me a DKA, it's not only the actrapid infusion, it is fluid also. So by the he comes back my patient's first dose of fluid is already in, I'm starting

	my second litre, and then, yes, it's just otherwise it's still follow protocol. So in that case, the patient doesn't become so severe or we don't prolong you know… treatment.
HS:	I hear you. So, the outcome of the patient and time, could it be …? [participant started talking before question was finished - overtalking]
P2:	And time, time is so important especially in trauma. Time is so important. But now the patient is going to sit and wait for doctor for a gas, he's going to be busy with other things, come back and gas the patient in a half an hour. And a half an hour is a lot for an emergency patient. You see what I mean?
HS:	I hear you, definitely. Time is important for a trauma patient.
P2:	Time is important, definitely. Definitely.
HS:	So, with regards to your advanced skills and uhm…that you obtained during your training, how do you experience any sufficient financial support, or financial …? [participant started talking before question was finished - overtalking]
P2:	It's very difficult, it is very difficult. Most of the times we have to make means of things that you are not supposed to use. But, you don't have, there's no stock.
HS:	Yes?
P2:	There's no stock, I must now make means of … the other day there wasn't … I didn't have electrodes in the unit, and then the only electrodes I could use, was the paeds electrodes. So the storeroom gave me the box of paeds electrodes. But lucky it still picked up, it's small and it's for children, but still I, I could do ECG. Do you see what I mean?
HS:	Okay, that is interesting.
P2:	If there is no… If there is no big IV Jelco, I must do with what I have now. And that also plays a role. You know with trauma patients they need big IV access. And then… we don't have sometimes, then you just push with what you have. Which also delays a treatment sometimes, which also causes the patient to spend longer time in resus and that. So, so so in terms of finances, it does play a role, because we don't always have what we are supposed to have, to give the best to to the patient that they …

HS:	Yes, that you know is the best for the patient.
P2:	Exactly. I I sometimes look at … we only have one blood gas machine *né*, and then I think theatre also has one. And then I look at, how a theatre sister must run to resus if their blood gas machine is not working, for a blood gas. Then I am thinking, how, is is if they are in theatre now, they're in theatre, I am sure the patient is stabilised he had his op, but still the sister must run from theatre [path description removed to de-identify hospital/unit] for a blood gas. So, you know, I sometimes really, I think in terms of that, they they do fail us. They do fail our patients and I and I always felt it is not about us, it is about the patient *mos*. You see? And there there's little things that they cry about or complain about that I know I am not supposed to do.
HS:	I hear you. I hear you, I hear you. So reflecting on something that you mentioned now, you said you tell management with regards to this new implementation they want you to rather update a computer than spend time with a patient. To what extend to you experience or perceive support from your employer, to rather implement your advanced skills in your practice?
P2:	We we do. We we we… I don't know, you know *mos* we go through communication channels… *nè*… *ja*. So..Our manager is also trauma trained, so I know they were, they were sitting with the criteria for resus and then at the same time, we were also sitting with what am I as a trauma nurse supposed to do in resus…advanced trauma trained person, what? I know they were sitting with that, but what they compiled didn't come back to us yet. It didn't come back to us. Because I think it was gonna to be like from SANC, also compare your scope of practice and compare this list of things that I am trained to do, compared to have a comparison done.
HS:	Yes?
P2:	But they didn't they didn't come back to us to say listen, ABC, you are supposed to do and it will expected of you to do and that and that.
HS:	So your job description, aligning your job description. So you are still a little bit is the dark about that, they didn't come back to you?

P2:	Aligning, yes. Ja ja My job description is still the same as I find it… how many years back, how many years ago. Essentially the one I signed in [hospital name removed], it is still the same, as any registered RN job description. Do you see?
HS:	I hear you.
P2:	There's nothing particular about emergency, nothing particular about trauma trained in that job description in any case. Yes, I'm responsible for stores. Yes, I'm responsible to lead my team. Yes, it's my duty to see that there is enough drugs. Yes, that is there, but other than that, practicing as a as a trauma trained sister in an emergency, like an ICD, inserting IV, it is not in there. I mean that is what they they needed to look at.
HS:	I hear you. So in your opinion what would you suggest in the future of a trauma and trained specialist? How should your role be adjusted in terms of implementing or utilising those skills? What would you suggest?
P2:	I think, I think they can if they can … they they they they should look at the job description again and then add maybe. But add in such a way that it is for a skilled trauma trained person, and also considering her scope of practice.
HS:	I hear you.
P2:	We still have a scope of practice, we still have to practice under that scope.
HS:	Yes, I hear you.
P2:	So, I think, ja, they should consider it definitely. because some things are withholding us back because of our scope.
HS:	I hear you. You mentioned triage and triage triaging a patient red. You've been trained in triage during your course. Have you been able to update your skills, or keep your skills up to date? With regards to … [overtalking, could not complete the question]
P2:	I did, ja I did. I did do I think last year I did the triage training again. We do we do get that, yes. Where you are upgrading your your training your triage training.

HS:	So you feel supported by your management and your line manager to keep your skills up to date?
P2:	For triaging, yes. For triaging, yes
HS:	And for others?
P2:	It's very difficult. For other courses it's very difficult to to…to go on, because now only I can do the BLS. I am I'm booked now for the BLS, I think it in next month. So if if if training … it's it's all about the training from the training department. Say for [hospital name removed] people, I am just making an example. [hospital name removed], only five can go for BLS training. But they don't consider emergency first must get priority, you see, because it's us that must basically that stabilise the patient for ICU, for for for theatre, for the ward and for whatever. But training sees it as something that will benefit the whole of [hospital name removed] nurses, not only EC. Do you see what I mean?
HS:	Yes, I hear you. So they will send you for BLS which is pretty much a very general skill, but not a skill specific to advanced practice in trauma?
P2:	General, Ja, I think for the advanced, if you want to, you can do it on your own, and you have to pay *mos*, for the advanced.
HS:	Yes, tell me more about that.
P2:	I am not sure, I didn't do the advanced yet after my training. I didn't do it yet. So I thought, okay, let me start, they want me to do the BLS first, so let me start the BLS. Do the BLS, if I pass it again, then I will apply, or speak to my manager again… to listen, I have done the BLS, when can I do my ALS through the hospital? Through through the the training department.
HS:	I hear you. So, it is not in place at the moment?
P2:	No, it is not in place at all.
HS:	You want to do it?

P2:	Advanced life support, I think there is a lot of us that want it. But we have to, I think … for me it was like okay, so they want BLS, I will do BLS. And then I will search when is there an ALS training or course, then I will specifically ask my manager to submit, because I want to do ALS now.
HS:	I hear you. I hear you …So that all was very interesting. I want to ask you if would say, a factor that really supported you to use your skills and apply your skills, what would that be?
P2:	I think is it my … it is that thing that I told you, changing my job description would be one I think. Or or or make it a little stronger for trauma trained.
HS:	I hear you.
P2:	Yes, changing my job description a bit and then comparing it changing it in that way, that it leads towards my scope of practice.
HS:	I hear you.
P2:	Something like that. I think that would be, for me…I would be more, how can I say, *gerus [assured]*. To say okay, I can do this because it's in my scope. You see what I mean? I think that is what is withholding us from a lot of things that we can or we want to experience, but because of that thing in the back of your mind ,hey, I still have the scope and I'm only registered for this and this and that. So we step back a bit. Ja
HS:	To end up, I just want your opinion or your experience of the recognition from other professionals within the multi-disciplinary team you were talking about, doctors and working with doctors. How do you think your advanced skills place you… in that multi-disciplinary team?
P2:	I think it is a very important role, for us, as advanced, because I can also say, like I had, quick example, I had an asthmatic patient the weekend in resus. We gave her meds, we gave her your everything, aminophylline infusion. And then she's cold, she's settled and then she's start again. So I told him, Doctor no, everything we are doing is not helping this child, just discuss it with [hospital name removed], lets discuss it with[hospital name removed]. [hospital name removed] say if she's settled, it means she is improving, then she can improve at [hospital name removed], you know. But we don't have a high care remember. But for me in my mind already, was say…this child needs a high care bed.

	Because who is going to monitor her so closely? She can't stay in resus the whole day. So, she was referred to the medical doctors … the medical doctors and then she became tight… unstable again. And then I had to sit now, me, the medical doctor, our trauma doctor. Because either we tube her, which is not going to be an easy intubation. Either, we we refer to [hospital name removed], we stabilise her again, as much as we can, and quickly refer her as an urgent case to [hospital name removed]. It's either going to be like that. Then we had to discuss. So my input was important to me there. My input was, because at the end of the day, the patient went to [hospital name removed]. Accepted in ICU, not even high care.
HS:	Yes, so you could advocate for your patient?
P2:	I could advocate for my patient with the skill that I have. Do you see what I mean? I mean if the if patient was in the ward, the sister would have just given nebs, just giving her nebs, not checking her tachy, because of the meds. Then she'll stress. Doctor, the patient is in a tachy, please come. See that is normal, I know that happens. What I would have…That is the difference between us.
HS:	I hear you.
P2:	RN and trained RN. I am a trained eye and I wouldn't stress about that. What I would stress about, is looking at my patient and seeing this is not helping. I give nebs, I change my meds. Doctor, okay, let's try IV. I always tell them if IV things don't help an asthmatic patient, the patient must either be tubed or or just be sent to high care or at trauma o r[hospital name removed] because we can't manage the patient.
HS:	I hear you.
P2:	So that to me, it is important because I can say, if a patient's stabbed neck gets swelling all of a sudden, No doctor, we're not going to keep the patient. Doctor, send the patient for CT next. And then the patient goes.
HS:	Oh, okay.
P2:	So yes, my role, in that terms it does it does play a role. It does it is very important. But also again know what you … because of the experience, my input is valid. Do you see?

HS:	Yes, your input is valid.
P2:	It is valid because I know what I am talking about. I know the complications, I know. So it does play a role, I think. And and and it's not always that that we have that. Or some sisters don't feel, it's not their place to say, should I put it like that, because he is a doctor. You see… That is between doctors only, I am not going to give input. And you know we're different *mos*. Now I have to step up and say no doctor, can you not just do this and that. And then the outcome can be maybe this and this and that. You see…But is not all of us not, everybody feels comfortable to give input.
HS:	Thats.. Tell me more about that. You say some will, and some will not. And by the sound, if I listen to you, you are the one that will get give your input. Will advocate for your patient and will try to use your knowledge and skills for better outcomes for the patient, while others will not. What do you think makes you as an individual… more prone to to do that?
P2:	I think it is about confidence. I'm not.. I always tell them you don't need to be full of yourself, you don't need to be… but because I have experience, I am not going to compare my experience or expect a junior sister in trauma to also step up and be bold. Just take your time, know then you can do it. You know. Always try to remember that. So I have worked at [hospital name removed], I worked in emergency, not even trauma. I think my experience in trauma, I use a lot of from my training as a trauma trained sister. I was never really exposed to trauma so much as in medical emergency. So, I am very good in medical emergency. So coming to [hospital name removed] was also a challenge for me, but I stepped back, I waited my chance. Okay they do this and this and this. But what did my book say when I did my trauma, this and this and that is fine. So I.. As a medical I was I was self-confident I felt listen I am going to tell now. DKA, I knew DKA out of my head any case.
HS:	I can hear that.
P2:	I treated them so much in [hospital name removed], because work in emergency, them some emergency, I went to the high care. So we had a lot of DKA patients there. So yes, so it's about, I always tell them if you challenge a doctor, remember to know why you challenge him. Right? You can't go challenge him if you don't know, if you don't even know the drug you are busy challenging him about, but you want to challenge him. So know your story. Know you story. So, *ja*, in terms of that, I think it is about confidence or being competent, if I can put it like that, ja. So, if you're not sure, don't go. Don't go. Right? Don't give input, just wait and see. Now you sit back and now you say okay, but this and this, we did that… we

	give that. Now you come back. Okay Doctor, not in a rude way, but, yes. Doctor, but weren't we supposed to do that? Can we not do this because, there must always be because this and this and that. You know?
HS:	I hear.
P2:	*Ja ja*…I think it's better, but for me I always tell them, and the nurses laugh at me when I say, I took my pledge very seriously. I did say my patient is my first consideration. Remember, in our pledge. And for me it is that.
HS:	That motivates you, my patient.
P2:	Right. No matter what, it it is still my patient.
HS:	And the and the fact that you felt confident and competent in your skills, you know what to do, you know how to do it, that helped you to apply your skills and give input. Very interesting. Well, thank you, is there anything else you would like to add?
P2:	No, it is just that, it's *nogal* nice to to to have somebody also listening or learning from my experience trauma, because people just think *ag*, trauma, they are just there. They quickly stabilise and then they go. It is nice to hear people thinking far, a bit further than that. What we go through to get that. What we must do what we must do to achieve that, you see? I think sometimes it is expected of … we must stabilise a patient. You know, a patient can't die because we are then the trauma trained people we are trauma, we're supposed to save them, and but they don't know what we have to go through to be able to save somebody, to be able to … al lot of things.
HS:	Yes, and the time involved in that.
P2:	And the time, all about time. Really, all all about time. We have a lot of challenges. The other day I told my [relation name removed], I think the more I am in this nursing, I…I'm not going to say, but is feels like nursing is becoming also political. Political in every, every single way. Political with, moneywise, scams are happening, not necessary at [hospital name removed], but in general now. I was just talking in general, because of the the the things I am going through, the others are also going through. Other hospitals, the sister staff that I know there are also going through that. So, I was telling him slowly but surely nursing is becoming also a political thing [crosstalk].

HS:	Tell me more about that political thing you are talking about.
P2:	Ja now…Just with simple simple things. When they built this [hospital name removed] hospital, they they didn't build it for that amount of patients we are catering for now. Because I don't think in their minds they thought there was more shacks are going to come, more people moving into [hospital name removed], because the number of patients we receive is unbelievable. I I cannot, you know, when I, when I in [hospital name removed] when we received the stats and we see 60 patients a day, it's nothing because [hospital name removed] is a big hospital. You see what I mean? It's a very big hospital. It accommodates this 60 patients, triage, whether they are discharged, whether they are for resus, intubated, there will there will be accommodation for them. Now at [hospital name removed], you know, so just get your total, you just get your total, nothing is being done about this big totals they are getting every day. To me it's like that. A long time ago, when I started there I noticed that this hospital is too small for the amount of patients they are getting.
HS:	In the trauma?
P2:	It is overcrowded. Especially the trauma. It is overcrowded, why? Because there's no space in the wards for the patients. You see? Now it becomes trauma's burden, and I have medical patients, yes. It becomes a burden on me because the ward now, if I can put a trauma patient in for review for monitoring overnight and then discharge in the morning, I cannot have, because I have medical patients in that ward, because there is no space in the medical wards for that patient. What has happened to my trauma holding area? Full, overloaded, patients now sit on chairs and wait, until we do another round to say this and this and that. You see? And and the crime, the fights have been ongoing and I don't know. This weekend resus, I received 20 resus patients, 20 trauma, only trauma. How are we … where are they going? Where? If now [hospital name removed] is already saying they are already full, we must just hold with this one ventilator, they're going to make a plan, then you hold onto this ventilator. Another gunshot red comes in, also for [hospital name removed] now because it's a vascular injury. Then also… I can't move them out of resus *mos*. You see? The pressure is there.
HS:	Also, from a political side there's barriers to this …
P2:	There are a lot of barriers but it's like it's just there, it is not in my hands to do anything. Even I'll say, I'll say my say, sometimes I feel like …. And sometimes you get fed up. You just go and say, I am just going to do my work. That's it. Because we've got no support really. Yes

	our manager can't do anything. We can only say guys, we have got 20 resus red patients, but they it took long to be sorted because there was a patient resus. [hospital name removed] was full, because this and this and that. So, there, he can go. Other than that, what is happening with the other, how can I say, *die die hoër* [the higher] management, what are they saying what can be done? And from there, higher than that, what are they saying can be done, so you see? [crosstalk]
HS:	I hear you. So if you say, then I just want to do my job, you mean, what do you mean by then I will just do my job?
P2:	Ja…Stabilise them, put him them on a ventilator. If there is no space in [hospital name removed], there is no space. The other red one, I must maar now stabilise him on a chair until I have space for him here. And then the doctor comes. Sister [name removed], but you only gave the fluid, you didn't start that actrapid infusion. Where must I start that Actrapid infusion? I cannot start it on a chair for my patient. Remember, so doctor, up until then … you see, that that thing. That thing is putting a lot of strain on us. A lot! . A lot!
HS:	Yes, because you know better, you have the skills do to better, for your patient, but you cannot do that in the chair.
P2:	I cannot do that. I cannot do that.
HS:	I hear.
P2:	So I think that is what is frustrating us more than anything. We know what we are supposed to do. But what must I do if I can't?
HS:	Yes, that's very interesting.
P2:	Even in… Even in the COVID times, it was a lot, a lot of pressure for us. And to me it was just … remember weren't going to… there was a criteria for resus patients of the COVID patients. And who we send to [hospital name removed] and who we are not going to do anything for. And even in that time, I I just stood up and say, because we had a respiratory resus and we had a trauma resus. And the respiratory resus would be the COVID patient, point blank COVID. We would nursed them there, stabilise them there, even intubated if we had to. But my thing was always, if a patient..I nurse a patient this morning I nurse a patient this morning

	…and I was struggling to, because you couldn't CPAP in the beginning of COVID. And then at least I double barrel him with oxygen and then give him the medication he had to get. And then tonight we still can't send him yet because he is 60, he has got hypertension, he is diabetic. My fight with the consultants was, if I stabilise him, he had a Sats of 40 when he came, then I stabilise him so good, that at least that by the end of my shift he had a Sat of 80. Does that patient not get a chance then? Why can he not get a chance to go to [hospital name removed] then? You see? So there was a big fight with that. You really, you had to fight. Then at night, I promise you, even if get home, I will phone, to ask the sister. Did the patient go to [hospital name removed]? But for for me that patient took for for a whole day at least, I kept him there, I kept him there. And I think that patient has a chance to go to [hospital name removed]. You see. It's fine if you tell me he's 60, his defaulted his hypertension, he's a poorly controlled diabetic. And then he's Sats is sitting at 50 the whole day. It is fine if you come to me with your consultants' round to say, sister [name removed], huh huh we are not going to push anything further. I understand that. But not if I nurse him the whole day, and then at seven his Sats is 85 at least from the 50 that it was. Then now I must withdraw. I will not do that. So, to me I said okay, then I am going to keep him in resus until you decide a proper plan for him. You see… There was a lot of that, there was a lot of challenges with COVID.
HS:	And once again political and policies …
P2:	Do you see, do you see? And now it comes [hospital name removed] don't have a bed, [hospital name removed] doesn't have space. Now we must give up on a patient. I am not going to do that. I told the straight. I am not going to do that. I am not going to do that, and I will keep him in this high, red resus, until there is a bed for him. But I I don't think it is fair towards my patient to do that. And somehow we we we we managed to do that. They listened at least.
HS:	And what happened to the patient?
P2:	The patient went to[hospital name removed], of course.
HS:	So, you advocated and you managed that?
P2:	I think, ja. We had to stand up. If we don't stand up it is just like, ag it is a done deal. You are not going to resus and that's it. You are not there to do this and that's it. And and Most…A lot of the the COVID patients require that skill to nurse them, you see? And it requires that,

	that coming from sister reporting to doctors, listen, be on the rounds and speak for your patients. Speak for your patients. If there was a slight change, like like in oxygen, improving. You know…You have to stand up now and say, hey, this patient is doing a little bit better. So give him that chance to go to [hospital name removed].
HS:	I hear.
P2:	So, ja.
HS:	Very interesting.
P2:	Interesting, I'm telling sister, very interesting but also challenging. A lot of challenges. A lot a lot
HS:	Of course. We're not nursing in a vacuum anymore.
P2:	Yes, not anymore. It's its amazing how we … I always look at, when I started, I always tell the junior sisters the the when I started, finished university, and I got the post at [hospital name removed], but I didn't expect them to place me in in trauma. Trauma wasn't even on my list first, it was second. I wanted to do gynae, to do gynae so I *sommer* put gynae, so I can get into gynae. Then they put me in trauma, now it was the only post there. Then I *sommer* must take it, it's fine. Then somebody said no, work a couple of months, and then ask them if you can't transfer you. And every morning when I went to work, I... there was a lift, I was on the second floor. There was a lift, and then most of the nurses took the lift, but I took the steps, because I was so scared to be first in red in trauma. [laughing] What is there's a resus coming? My stomach, I was so anxious… I think the whole month of that January, February I was so anxious, I didn't want to be left alone. Up until a day then I was left alone with a resus. And I had to find my own way. I had to stand now… taking in all this things that I was taught, taking in and just doing the resus and intubating the patient. So so so that it how you learn.
HS:	And how did you feel when you did that?
P2:	I thought okay, I can do this. There is no need to be scared because now I know. You see? That I know! At least I know. This and this and that, at least. So, I am always telling them, it is fine. If today, just…Today you don't know how to to nurse a ventilated patient, give it time,

	give it time, you are going to learn. Nursing is all about learning. And itt is amazing from what I was… up until what I am today.
HS:	Well done.
P2:	It is amazing, it is amazing how you grow as a nurse. How you grow, you feel how you develop your skills, how you pick up things. It's not…It is amazing, because it is also up to you. If you are open to learn, if you are open to say okay, teach me this because I don't know. Show me this because I don't know. It is all up to you, really. But but…for me also from from what nursing was in those days, you know *mos* in the old days, the sister is the sister.,,you do your meds, you do your IV antibiotics, you do your books books, your nursing books..books, you do your allocations, you do … it's that picture we got *mos*, remember? That is the picture that we got.
HS:	Yes.
P2:	The nurses full wash the patient, the nurse will feed the patient…give the IV. That is long gone, to me that is long gone, to me that is long gone. Really. It is long gone. It it's is how we do things now is important, your input is important, you skill more important, your skill, more important you skill, you had to have that skill. If you are trauma, I think that is why it is a very good thing because for us to be in trauma trained, for us to be theatre, because that is what we are good at. And and for me, I always say, if you enjoy what you do, enjoy what you do it's worth doing that thing. It is so strange, you enjoy I know for a fact I am not an ICU sister. I cannot look after one patient the whole day, the whole day. I I It frustrates me even if I go to the overnight ward to train, to give medication, do all this, TB, and you know this this. And then when I am in resus, it's like you live yourself out, you know you you see?
HS:	And it's rewarding, is that what you are saying?
P2:	Yes, at the end, yes, I think so. It's a good thing to be where you must be. Where you must be, really.
HS:	It was so lovely talking to you. Thank you.

APPENDIX 9: Declarations by language and technical editors

CERTIFICATE OF EDITING

I refer to the following dissertation:

Trauma and emergency nurse specialists' perceptions of factors that hinder and facilitate the implementation of advanced skills in their practice within the public health sector in the Western Cape Province

HAROLDENE STEVENS

This dissertation was edited by P Murton, who has more than ten years' experience as a professional editor and who is a member of the Professional Editors Group. Full details of experience and qualifications are appended.

The edit included *inter alia* the following:

1. The text was edited for grammar, punctuation and consistency.
2. The paper was edited to ensure proper academic style and to ensure agreement with the Guidelines provided by Ms Stevens on citations and referencing.
3. The editor made no attempt to impose his own personal writing style on the unique style of the author.

13 February 2021

P Murton LLB BSc

Full member – Professional Editors Group

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22 January 2021

Ms Haroldene Stevens
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Dear Ms Stevens

Translation of thesis abstract

The Stellenbosch University Language Centre hereby confirms that in January 2021 we translated your thesis abstract from English to Afrikaans.

Please contact me should you have any queries.

Regards

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